SOAP

SANITARY CHEMICALS

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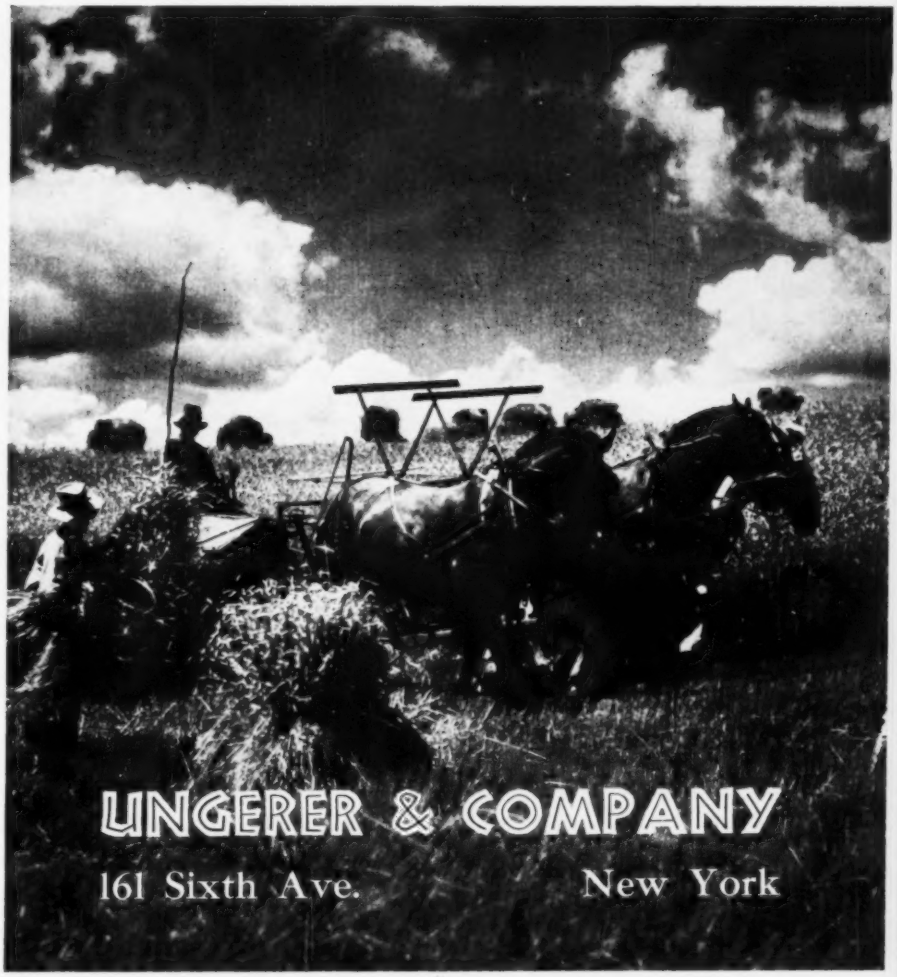
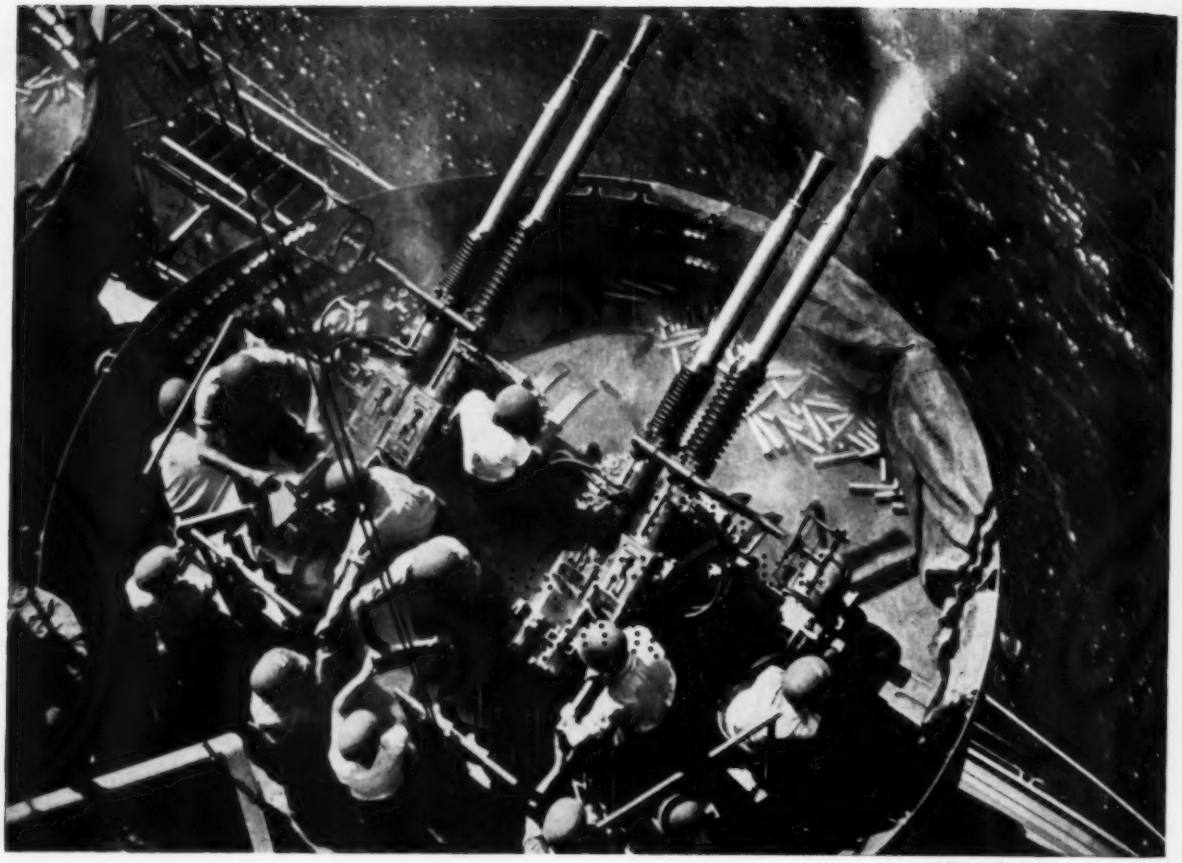
EXPERTS...

TO convert the materials of nature into finished products takes expert knowledge born of experience . . . just as behind the perfuming materials supplied to many leading manufacturers by UNGERER, there stands over a half-century of specialized experience as expert guidance . . . whether they be essential oils, aromatic chemicals, or perfume specialties, time has proved that it pays to . . .

. . . Consult UNGERER!



November 1944



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Products which are available to the perfumer at reasonable prices:

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METHYL NAPHTHYL KETONE LIQUID	PHENYL ACETALDEHYDE DIMETHYL ACETAL
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PHENYL ETHYL ALCOHOL	PARA METHYL HYDRATROPIC ALDEHYDE
IONONE A. B.	CINNAMIC ALCOHOL
IONONE METHYL	CYCLAMAL

Also a full line of Aromatic Chemicals used for Perfumes - Soaps - Cosmetics

Requests for samples on your firm's letterhead and further information promptly furnished.

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Looks like pine oil disinfectants and has the pine odor . . .

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P-19 has a phenol coefficient of 5 (FDA) against E. Typhi and 4 (FDA) against Staph. Aureus. Ordinary pine oil disinfectants do not kill the Staph. Aureus organism . . . have a lower coefficient against E. Typhi. This high bacteriological action makes P-19 the ideal disinfectant for general sanitary use in building maintenance work. Remember, it's the phenol coefficient that proves the power of a disinfectant!

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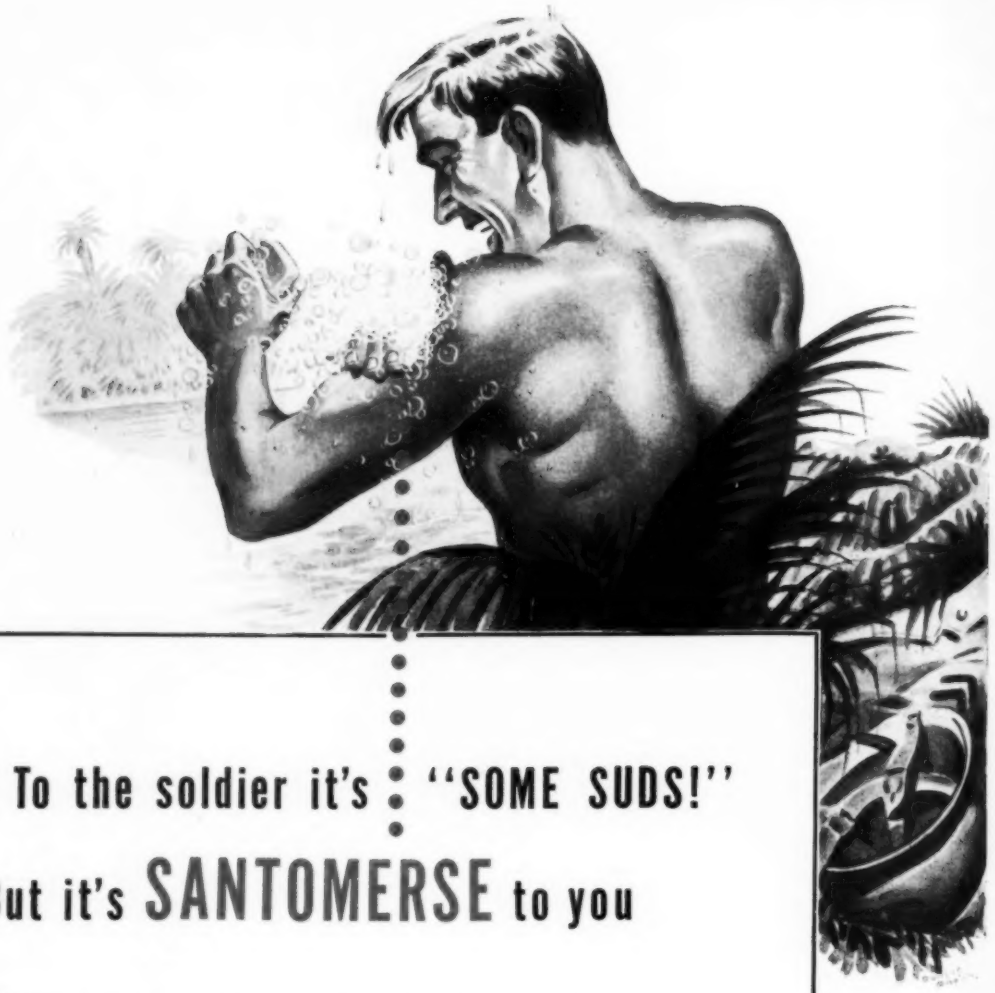

To the soldier it's "SOME SUDS!"

But it's SANTOMERSE to you

Whether a soldier dives into the rain-fed waters of a tropical stream or dips into the cold brine of the Arctic to bathe or wash his clothes, the soap he carries has something that gives him "SOME SUDS!"

Those of you who know Monsanto products probably will say: "Santomerse is *the* something that makes those cleansing suds."

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MONSANTO CHEMICALS

SERVING INDUSTRY . . . WHICH SERVES MANKIND

Volume XX Number 11

SOAP and SANITARY CHEMICALS

Reg. U. S. Pat. Office

NOV.
1944

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Published by

MAC NAIR-DORLAND COMPANY, INC.
254 WEST 31st STREET, NEW YORK 1, N. Y.

Subscription rate, $3.00 per year. Foreign, including Canadian, $4.00. Copy closing dates—22nd of month preceding month of issue for reading matter and 10th of month preceding month of issue for display advertising. Reentered as second-class matter, Feb. 9, 1938, at Post Office, New York, under act of March 3, 1879. Mail circulation October, 1944, 3979 copies. Total circulation 4,100.

There are red oils . . . and then there are Emery's *red oils.*

Emery's red oils (oleic acids) are made from animal fats carefully blended and then processed under strict laboratory control by methods which were developed by our own Research and Engineering Departments and which have no counterpart in the Fatty Acid industry.

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(OLEIC ACIDS)

O-18 Extra Elaine
An all-purpose distilled oleic acid with a titre range from 8°-12° C.

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Chemically the same as O-18, but more highly refined to produce a very light-colored fatty acid.

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A grade still further processed to bring the titre below 5° C. Recommended for uses where this low titre is required.

O-22 Medium Titre
A saponified (undistilled) oleic acid of exceptional purity. Titre range from 15°-18° C.

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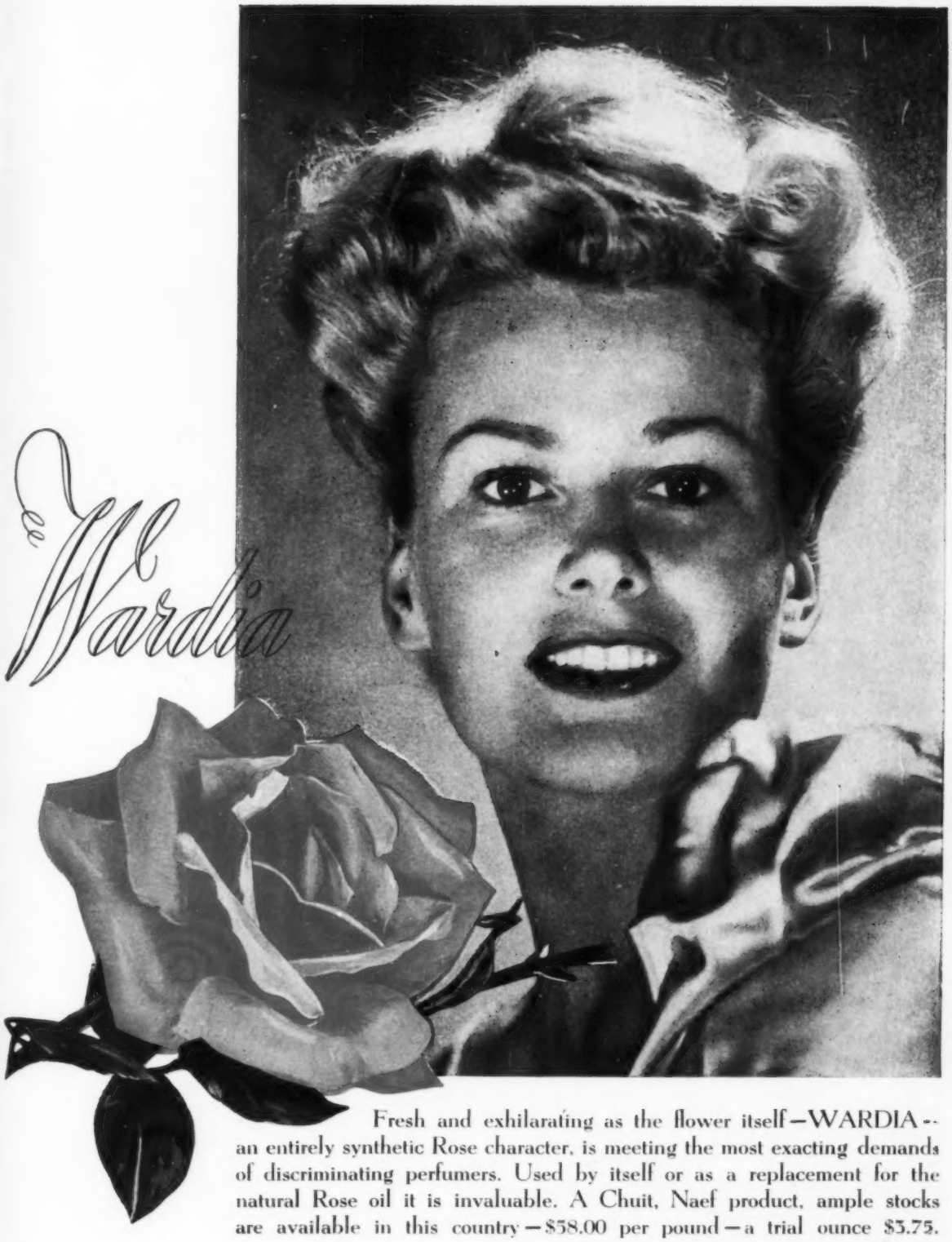

Fresh and exhilarating as the flower itself—WARDIA—an entirely synthetic Rose character, is meeting the most exacting demands of discriminating perfumers. Used by itself or as a replacement for the natural Rose oil it is invaluable. A Chuit, Naef product, ample stocks are available in this country—$58.00 per pound—a trial ounce $3.75.

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Hysan's
D.T.
Heavy Duty Cleaner
A SOLVENT POWDER
D.T.
Safely
REMOVES heavy, downtrodden GREASE and GRIME
from CEMENT and WOOD Floors
... and from ANY OTHER SURFACE
where grease accumulates
... even airplane engines
CONTAINS SPECIAL SOLVENTS★
QUICKLY SOLUBLE IN WATER
... won't harm hands or paint
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penetrates, emulsifies and dissolves dirt that strong caustic solutions fail to remove
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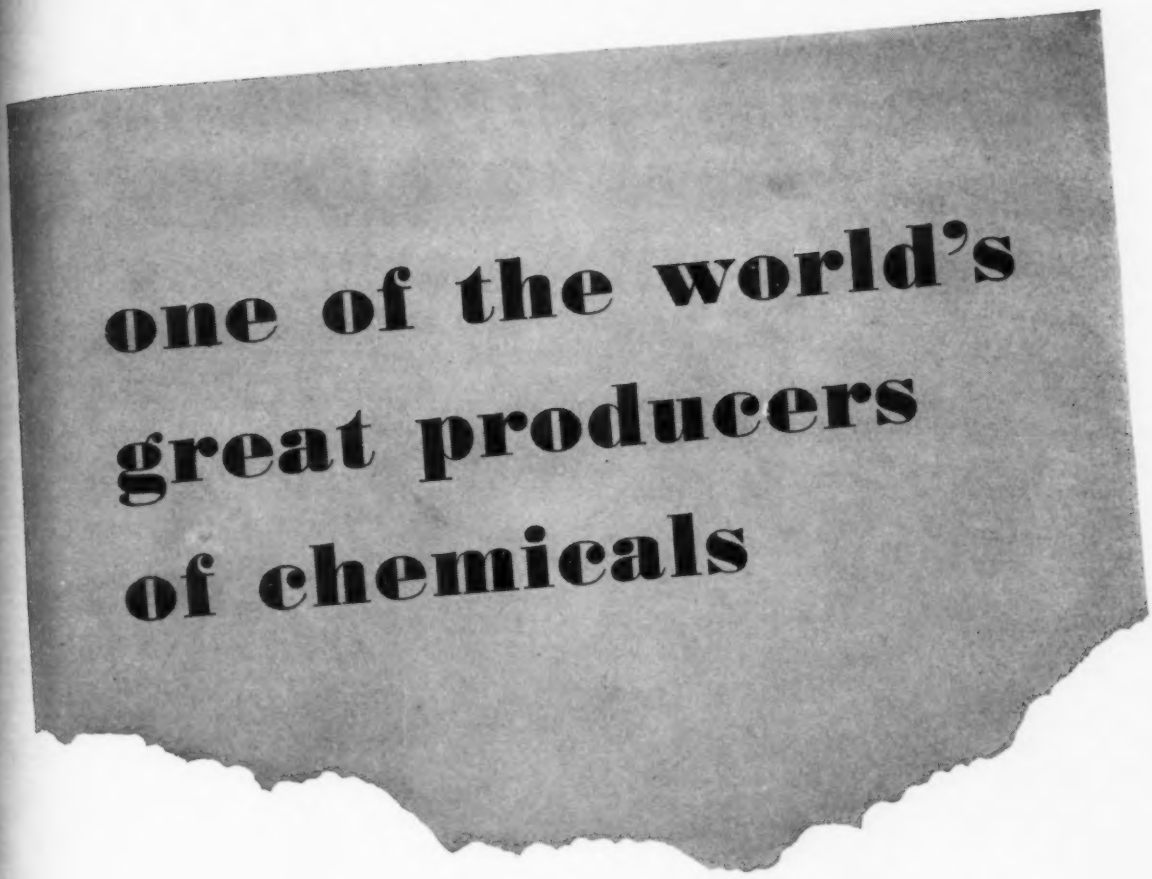

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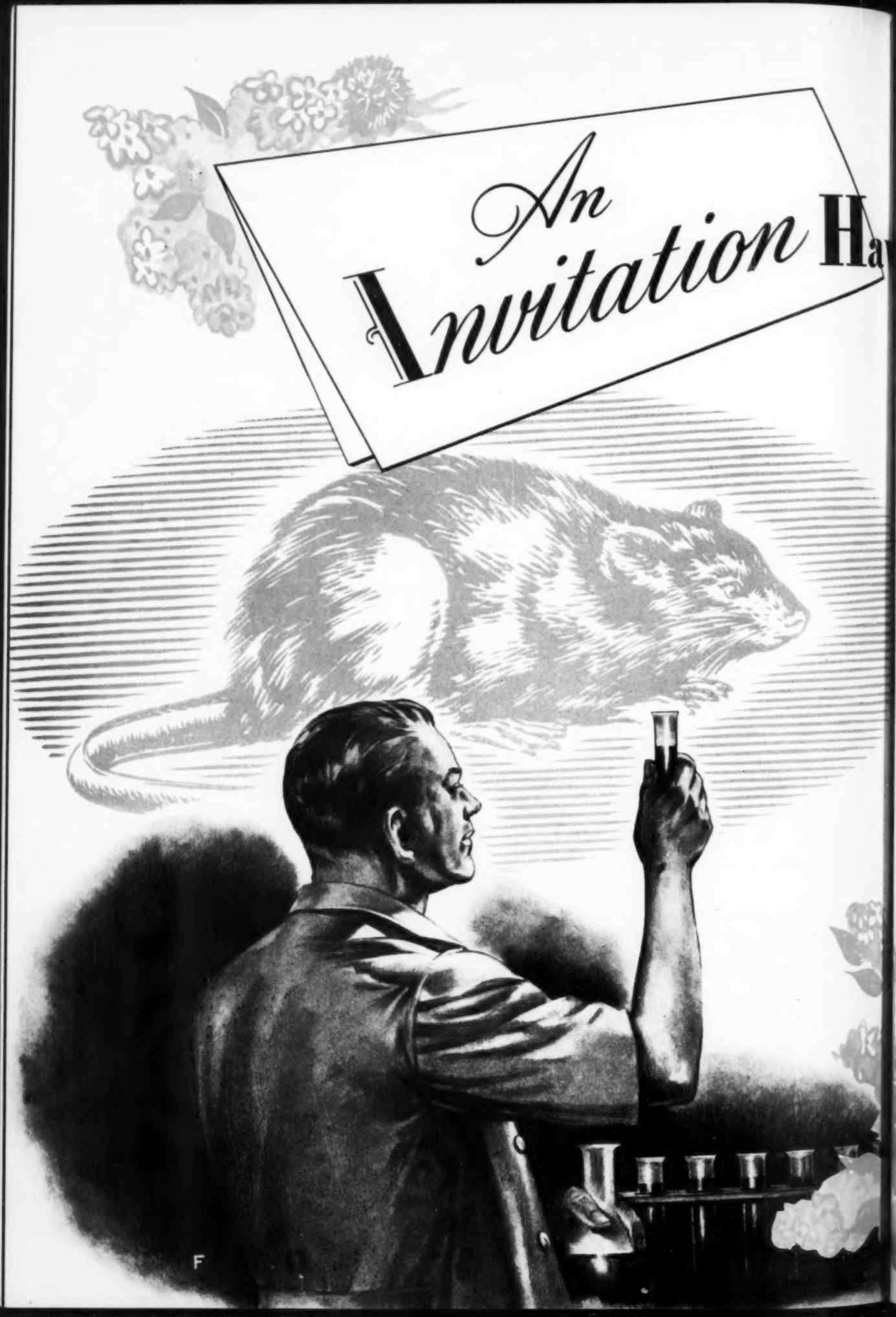
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CREATED BY *Givaudan*

MUSC CIBATA is the first natural musk ever produced in the U. S. A. Developed by Givaudan in conjunction with leading universities, it is made from the glands of the American muskrat (Ondatra Zibethica) and offers the perfumer a new and reliable source of supply for a musk with remarkable odor and fixative qualities.

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Givaudan-Delawanna, Inc.

330 WEST 42nd STREET • NEW YORK 18, N. Y.

SANITARY PRODUCTS

their manufacture, testing and use

By Leonard B. Schwarcz

CONTENTS

Sanitary Products Industry — reviewing the type firms in the industry, the products they manufacture, and their annual value.

Discovery of Bacteria—historical background on the germ theory of infection.

Principles of Disinfection — the role of chemical preparations in disinfection; definition of disinfectant terms.

Coal Tar Disinfectants—a review of their manufacture and use.

Cresol Compounds — Liquor Cresolis Compositus, B.A.I. Compound, petroleum-type cresylics.

Pine Oil Disinfectants—manufacture, properties and uses.

Hypochlorites—manufacture, properties and uses of chlorine disinfectants.

Formaldehyde—its applications in the disinfectant field.

Oil Soaps—manufacture, sale and use of jelly soaps, green soaps, auto soaps, floor scrubbing soaps, etc. Special attention is given to manufacture of oil soaps from fatty acids.

Liquid Soaps—The case for liquid soaps for washroom use. A review of raw materials, manufacturing methods, use, etc., with special attention to the problems of clarity, concentration, dispensing equipment, etc.

Soap Dispensers—a review of the common types of liquid and powder soap dispensers, push-in, push-up, tilt, goose-neck, pullman, etc.

Floor Waxes—A review of raw materials for floor wax manufacture and a study of manufacture and application of liquid waxes, paste waxes, water-emulsion waxes.

The Insect Problem—A review of the general role which insecticides must fill in man's battle against the insect world.

Pyrethrum Insecticides—The important place that pyrethrum has taken in the manufacture of non-poisonous insecticides. Manufacture, testing and use of pyrethrum insecticides are reviewed.

Rotenone Materials — Occurrence and toxicity of rotenone, and its use as an insecticidal raw material. Comparisons with pyrethrum on toxicity and deterioration.

Synthetic Insecticides—The most complete review yet published of the chemical nature, characteristics, and use in insecticides of a dozen synthetic materials.

Activators—The action of activators in stepping up insecticide toxicity. A study of activators which are in current use.

Roach Control — Roach powder formulation. The role of sodium fluoride and borax.

Bedbug Liquids—Control methods and special preparations.

Livestock Sprays—Manufacture and use of cattle sprays, with particular emphasis on repellency, application and choice of oil base.

Sprayers—A review of hand, continuous and electric types. Applicators for aerosols are also discussed.

Moth Preparations — Use of paradichlorbenzene, naphthalene, cedar preparations, etc., in moth control. Cautions on labeling.

Deodorant and Urinal Blocks—Para vs. naphthalene blocks. Pressed vs. molded blocks. Perfuming, wrapping, etc.

Labeling and Packaging—The most complete review ever published of the obligations of the sanitary products manufacturer under the Insecticide Act of 1910, The Caustic Poisons Act, The Federal Trade Act, the Food, Drug and Cosmetic Act and the various state laws. Typical decisions of the AMA and the FDA in reviewing offending labels are presented, along with sample labels of approved content.

Appendix—Complete text of Insecticide Act of 1910, Caustic Poisons Act, Peet-Grady Test for Insecticides, FDA Method for Disinfectant Testing, Mercury Reduction Method, Seil Method, NAIDM Specifications, list of approved antidotes.

SANITARY PRODUCTS has standard high-grade book binding, cloth and board covers, 6 x 9, 312 pages. Priced at $5.00 per copy. Check *must accompany* order. Orders for books to be sent on approval *cannot be accepted*, but the usual return privilege will be accorded where copies are returned unmarred within 10 days. Owing to present conditions, the first edition must be limited. Accordingly an *early order* accompanied by check is suggested.

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PRESENT reduced supplies of natural floral essences emphasize the value of high quality substitutes. Synthetic floral essences can be used to replace the natural oils with full satisfaction and marked success in numerous products,—toilet soaps, shampoos, shaving creams, powders, creams, and many others.

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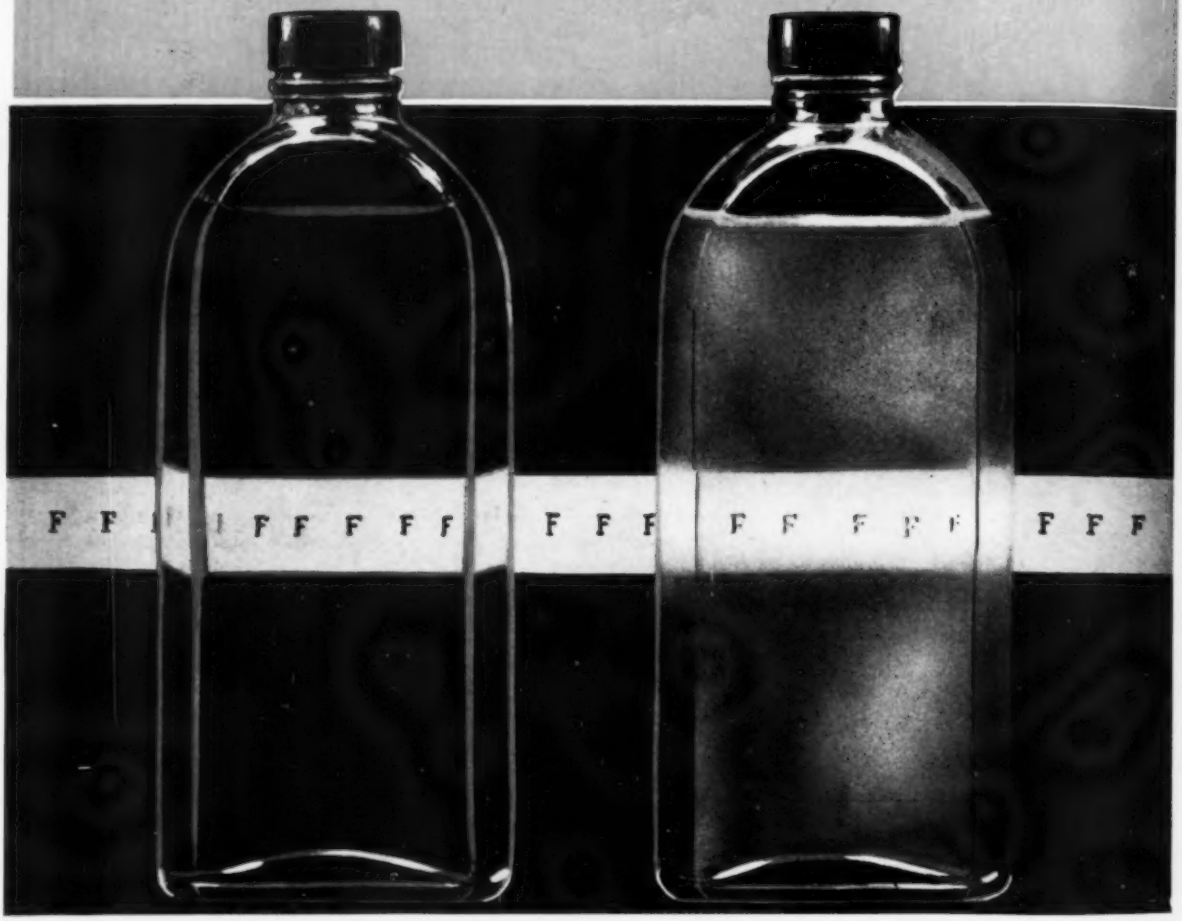

Note the clarity of the water solution of Felton Aquaromes on the left in comparison with an ordinary water soluble perfume oil.

WATER SOLUBLE PERFUME OILS

Completely soluble in water... AQUAROMES leave no trace of oil film or cloudiness, and lastingly and economically perfume a large variety of products. Liquid Shampoos! Deodorant Sprays! Theater Sprays! Formaldehyde Sprays! And many others!

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MANUFACTURERS OF AROMATIC CHEMICALS, ESSENTIAL OILS, PERFUMES AND FLAVORS

Maybe it's natural to rest a bit on today's sales laurels. Pleasant dreams!

But when the awakening comes, competition may be pounding around the sales curve way out in front. That is, unless you're planning a product surprise or two today — for tomorrow.

If you haven't studied the potent possibilities of product improvement available through the use of Nimco Brand Lanolin, Degras and other grades of wool fat, this is the time to begin your experiments.

The facilities and the know-how that have made Malmstrom America's Largest Supplier of Lanolin and Degras are available to you, together with samples, should you prefer to conduct your own tests.

America's No. 1 Choice Because It's 5 WAYS BETTER

MALMSTROM NIMCO BRAND LANOLIN

1. LOWEST *ODOR* VOLUME
2. GREATER *UNIFORMITY*
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4. SMOOTHER *TEXTURE*
5. FINER *BODY* CONSISTENCY

N. I. MALMSTROM & CO.

America's Largest Suppliers of { **LANOLIN** • Anhydrous U.S.P. • Hydrous U.S.P. • Absorption Base • Technical
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An **ADVERTISING AGENCY** *Describes*

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"Every single segment of the institutional field shows promise of being a bigger customer than ever before.

"The institutional field consists of those businesses and services whose functions are the mass housing and mass feeding of individuals. The major segments of this market include hotels, hospitals, restaurants, schools and colleges, industrial cafeterias, clubs, homes and asylums, public institutions and similar establishments. In addition it includes a vast array of government institutions such as veterans' hospitals, office buildings, welfare facilities and others.

". . . There are approximately 300,000 institutions in the United States containing a total of 4,350,000 rooms. Their total floor area is 3,250,000,000 sq. ft. They employ over 4,000,000 workers. During a normal operating year the institutional field . . . is responsible for the purchase of $6,400,000,000 worth of maintenance and operating supplies and equipment. In the immediate post-war period this figure will reach $8,500,000,000, according to most recent surveys.

"As huge as the institutional market is today, it is going to be even greater after the war. The rapid growth of such influences as hospital insurance . . . the eating-out habit . . . the pent-up travel urge . . . the war boom in industrial cafeterias . . . all these and others . . . are exerting an upward pressure on the institutional market and every single segment of this field shows promise of being bigger than ever before . . . There is your institutional market! I strongly urge you to go after it."

The foregoing is from a talk by Mr. M. J. Evans, chairman, Evans Associates, Inc., advertising agency, Chicago, describing the institutional market before the June, 1944 Convention of manufacturers of cleaning compounds, disinfectants, insecticides and sanitary chemicals. Mr. Evans' photo, addressing this group, is shown at the right.

INSTITUTIONS Magazine is the only publication

through which you can reach all related divisions of the institutional field. If your present or contemplated products have an application to this field, your advertising messages in the columns of INSTITUTIONS Magazine will gain for them the kind of acceptance they must have to share in the huge institutional market.

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Widespread Use of Glass Block Seen for Postwar
No to Guest Now— None Tomorrow!
Experts Tell How to Wash Wallpaper
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MAGAZINE
POSTWAR PRODUCT FORECAST
Urge Use of No-Point Low-Point Food Recipes
FUNCTIONAL DESIGN, EASIER MAINTENANCE WILL BE FEATURED
DECORATORS STRESS POWER OF COLOR TO
Serve These Foods!
AWARD OF MERIT TO GO TO OPERATORS TAKING PART IN CAMPAIGN
TWELVE PRIZE
Wider Range of Sizes and Makes Promised

A Complete Report

of Mr. Evans' study and description of the institutional market has been printed in booklet form. Copies are available upon request. Write to INSTITUTIONS Magazine, 1900 Prairie Ave., Chicago 16, Illinois.

Your INSTITUTIONAL MARKET

CONSULT YOUR ADVERTISING AGENCY

These Hooker Chemicals May Relieve some of Your Material Problems

Sorry we can't sell you all the Hooker Caustic Soda you could use right now. We too, are hopeful that this situation may soon be relieved, and once again your receipts of Caustic Soda will be increased.

There are other Hooker Chemicals which are very important to your operations. Many of these are now available in the quantity and the *quality* you need. Some of them, their properties and uses are listed below.

PRODUCT *Chemical Formula* *Molecular Weight*	DESCRIPTION *All Specific Gravities at 15.5°/15.5°C*	SUGGESTED USES
Benzoate of Soda—USP C_6H_5COONa; 144.0	White, odorless, crystalline solid.	Antiseptic in pharmaceutical and medicinal preparations, in tooth pastes and powders.
Benzoic Acid C_6H_5COOH; 122.1	White, crystalline material.	Ingredient of cosmetic creams, lotions and other pharmaceutical preparations; antiseptics, dentifrices, dyestuff intermediates. Manufacture perfumes and pharmaceuticals.
Cyclohexanol **(Hexahydro Phenol)** $C_6H_{11}OH$; 100.1	Clear, colorless liquid with pleasant aromatic odor. Sp. Gr. 0.962. Boiling Range High Grade, 158° to 160°C; Tech. Grade, 155° to 165°C.	In manufacture of disinfectants, germicides and insecticides, perfume in soaps; solvent.
Methyl Benzoate **(Niobe Oil)** $C_6H_5COOCH_3$; 136.1	Clear, colorless liquid with odor resembling oil of wintergreen. Sp. Gr. 1.0930. Boiling Range 4°C Max. including 199°C.	Deodorizing material for soaps and in manufacture of perfumes.
Methyl Cyclohexanol **(Hexahydro Cresol)** $CH_3C_6H_{10}OH$; 114.1	Slightly viscous straw colored, neutral liquid which becomes glasslike when cooled below room temperatures. A mixture of ortho, meta, and para isomers. Sp. Gr. 0.924±.003 Boiling Range 155° to 180°C.	Perfume in soaps and to incorporate solvents and phenolic insecticides; solvent.
Monochlortoluene $CH_2C_6H_4Cl$; 126.5	Clear, colorless liquid. Sp. Gr. 1.0810. Boiling Range 158° to 163°C.	Intermediate for organic chemicals.
Orthodichlorbenzene **(1:2 Dichlorbenzene)** $C_6H_4Cl_2$; 147	Clear, colorless liquid. Sp. Gr. 1.310±.005. Boiling Range 10°C. Max. including 180°C.	Insecticide, solvent for natural and synthetic gums, tars, grease, oil, fats. Ingredient of metal polishes, paint and varnish removers. Manufacture of pyrocatechin, dye intermediates, synthetic organics.
Sulfur Dichloride SCl_2; 103	Dark brown or reddish liquid. Sp. Gr. 1.638±.005. Decomposes above 40°C. 66% Min. Cl_2 content.	Chlorinating agent, in manufacture of organic acid anhydrides and in organic synthesis.
Sulfur Monochloride S_2Cl_2; 135	Yellow to slightly reddish liquid. Sp. Gr. 1.690±.005. B. P. 138°C. 50% Min. Cl_2 content.	Manufacture of insecticides, linseed oil substitutes, dye intermediates, pharmaceuticals, organic acid chlorides.

Additional information is available in our General Products List or in data sheets on specific products when requested on your business letterhead.

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Chlorine Caustic Soda Ferric Chloride Muriatic Acid Sodium Sulfhydrate
Sodium Sulfide Paradichlorbenzene

Make Your Contacts Now

★ ★ ★ for Contracts Later

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Your advertising in the National Butter and Cheese Journal, The Milk Dealer, and The Ice Cream REVIEW will bring you contacts now that mean *contracts* later.

These 3 leading Olsen publications put you into the front selling line of the dairy industries. Here is a rich responsive market for insecticides, cleaners, detergents, and germicides that will repay you handsomely in sales returns.

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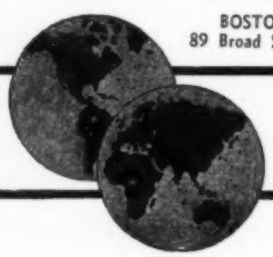

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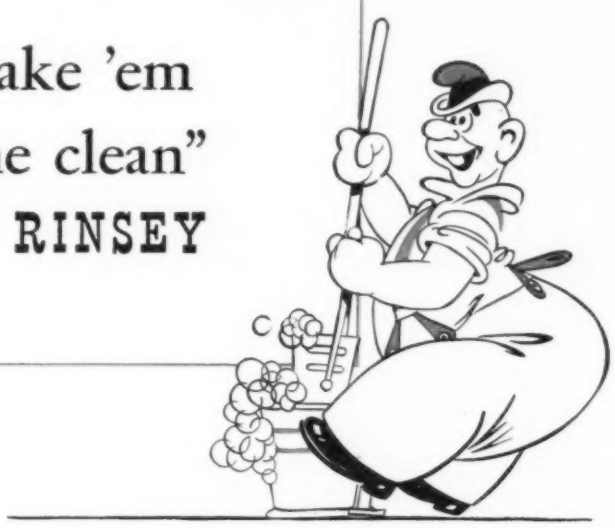

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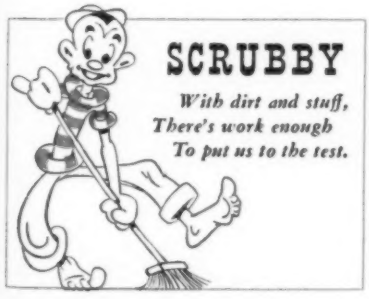

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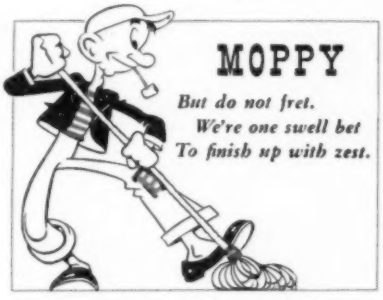

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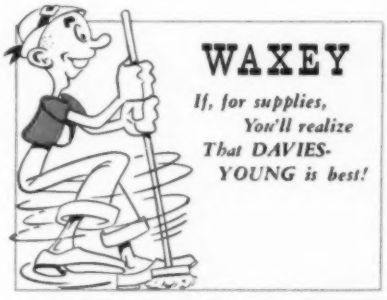

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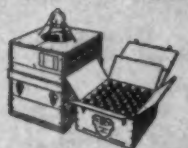

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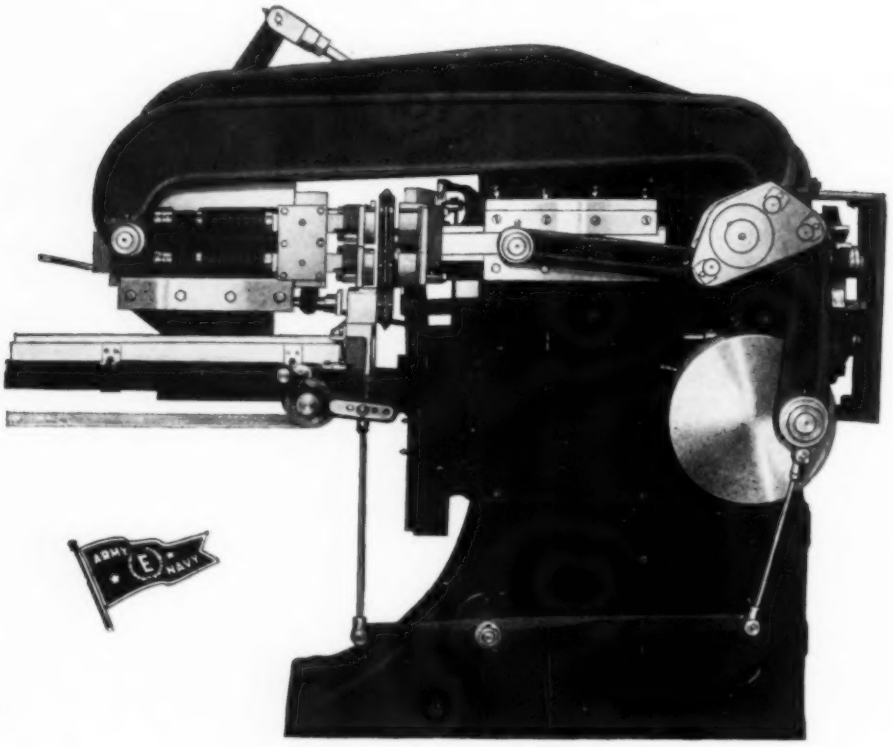

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AS THE EDITOR SEES IT

FOR years, the Philippines to the average American soaper, large or small, has spelled coconut oil. It is not discounting the gallantry and sacrifices of the hard-fighting American Army now engaged in the reconquest of the islands that the habit of years should, to a degree, govern the thinking of soap manufacturers in this respect even today in the midst of a serious military campaign. But it will be some time before the production and shipment of coconut oil from the Philippines will be resumed as in pre-war days or even on a small scale, we believe. Trees, fruit and mills not already destroyed will probably be laid waste before the reconquest is completed. Present temporary sources must continue to furnish their meagre supplies, possibly for another ten or twelve months. And in the meantime, most soapers are quite curious as to just where the other fellow is getting his coconut oil, if any—and how much.

ARE the facilities available in the United States to produce some five billion pounds of finished soap products between last July first and the same date in 1945? And is the necessary labor available in or to the soap industry? Based on WFA figures for fat and oil needs in soap manufacture, this is the quantity of soap products of all kinds which must be manufactured to supply the estimated demand for domestic and export requirements. Irrespective of the quantities which are ex-quota, the raw materials must be found and processing facilities sufficient, or the soap cannot be produced.

If this figure represents a true picture of soap needs, we are liable to see a return to the stringent fat and oil situation of early 1943 before too many months are past. Likewise a genuine soap scarcity in the domestic market might readily develop by early 1945. That any such production figure, if it could be met, would represent a strain on present facilities under current conditions, we feel, is putting it mildly.

HOW long after the war ends are government controls of one sort or another going to be necessary? Knowing that business and industry are sick and fed up on limitations, allocations, quotas, and the like, nevertheless it does not seem likely that the props can be kicked out from beneath the war-time structure of controls in one motion and permit the laws of nature and economics to take their own unrestricted courses.

Any such beginning toward a readjustment to peace-time conditions would mean a period of chaos during which the weaker elements of our industrial structure would be knocked out beyond recovery. Those who have given the greatest service in the war because of the completeness of conversion or a wide increase in production and facilities would suffer most. In the race for peace-time markets, they would be last away from the starting mark. In readjustment, they would require the longest time. And, so, much as it is increasingly distasteful to all of us, and as much as we demand that government get the hell out of business and leave us alone, the war as far as industry is concerned will not be over for a couple

of years after the fighting ends. Some sort of continued controls will be with us, and whether we believe it or not, they will very probably be necessary until our feet are again back on the ground.

WITH the prospects apparently bright that the war in Europe may well be over before long, a natural optimism as to the future outlook is quite understandable. It has been 25 years since we had to go through the period of readjustment from the first World War, which finally ended up in the great depression, and perhaps the recollection of that difficult period has become a little dim. The past few years of easy sales and a ready market for anything that could be produced may have caused some of us to forget that there was a time when it was impossible to sell a good product at a low price, and that the time will come again when sales will once more be difficult. The present wartime shortage of labor may have caused us to forget, too, that before war industries made necessary the employment of even the lame and the blind, unemployment was our number one national problem,—a problem which in the six years from '32 to '39 had never been solved by our national program of spending and relief.

As we contemplate our possible ability to operate in the post-war period under a national debt which may reach three hundred billion dollars, we may have forgotten that it was *after* hostilities ended in the first war that we underwent our heaviest expense in loans to our allies,—and to defeated Germany under that unfortunate economic fiasco, the Dawes plan. We may have forgotten that it was only this policy of tremendous external loans which built up the false prosperity of the late twenties—based on an export market which lasted only as long as our ability and willingness to loan money held out.

As we look forward now to the post-war period under the menace of a huge national debt, we must keep in mind that in addition to the pressure to loan money abroad to rebuild Europe there will also be tremendous pressure at home to indemnify our fighting men for the big war plant wages which they never had a chance to collect,—pressure too to extend generous unemployment benefits to war workers who in many cases have squandered the wartime payroll windfalls which they should have been salting away.

Once hostilities have ended we shall of course be free speedily from the heavy burden of war costs, but we must keep in mind that as war production is cut back, the volume of income tax receipts based on the swollen wartime incomes will also recede. One of these days this country must inevitably come up against the hard fact that while social experimentation is in many ways commendable, it costs tremendous sums which we unfortunately no longer have to spend. Although the war may be almost won, it is still a long way from being paid for. And until we pay for it, we are all going to have to tighten our belts on many other worthy projects. It is this unfortunate necessity for paying the economic cost of the war that causes us to view the period ahead with something less than complete optimism.

WITH the hope that a number of important natural perfuming oils may again in the not too distant future be available in something akin to normal supply, large users look for a widening in their choice of perfume materials. Sight cannot be lost, however, of the job which suppliers of perfuming products have done over the past three or four years in making available many excellent substitutes for perfumes cut off by the war. We feel that it is a fact that extremely few finished products suffered in either quality or sales because of an enforced change in the perfume previously employed. In some instances, the substitutes may permanently replace the original odors if price ratio and other conditions do not change too greatly.

CLEANERS *for*

CARPETS, RUGS and UPHOLSTERY

by Milton A. Lesser

YEARS ago when carpets or rugs needed cleaning, they were draped over a line in the back yard and beaten till the dust flew—and most of the neighbors complained. If the weather was inclement and cleaning was in order, salt was often scattered on the floor coverings "to lay the dust" and the broom was vigorously applied. Then carpet sweepers were introduced and later—luxury of luxuries to the housewife—vacuum cleaners came into being.

As the need for more thorough cleaning came to be realized carpet "laundries" came into existence to meet a growing demand. In the course of time, methods for cleaning rugs and carpets without removing them from the floors were developed. It was but a simple and logical step that this should result in products which the housewife herself could use to clean these floor coverings. Many of these products were also suitable or readily adaptable to cleaning upholstery so that often one item served a variety of useful functions.

It is quite probable that in the normal course of events, carpet, rug and upholstery cleaners for the home would have found themselves a steady and very respectable market. However, as was pointed out in a recent survey reported in *Soap and Sanitary Chemicals*, (1) war-born conditions have greatly accelerated the popularity of these special items.

From the consumer angle, these specialized cleaners fall into three general classes; these include liquids, pastes and powders, with several subclassifications in each category. The manufacturer, however, is more likely to classify these cleaners according to the raw materials that go into their formulation. On this basis, cleaners for carpets, rugs and upholstery may be classed somewhat as follows: a) soap bases, b) alkali cleaners, with or without soap or other detergents, c) soap-solvent combinations, and d) synthetic detergent bases. Sweeping compounds and powdered preparations for use with vacuum cleaners are intended exclusively for use on carpets and rugs, while certain other products are designed more or less specifically for use on upholstery. It must be realized that even though the majority of products serve a triple purpose, pile fabrics such as carpets and rugs can stand up better under stronger cleaning compounds than can upholstery materials. Hence it is generally advisable, especially when alkaline cleaners such as trisodium phosphate are included in the formulas, to recommend higher dilutions for upholstery than for carpets and rugs.

With an important place in commercial rug cleaning processes, (2) soaps of various kinds form the basic raw materials for a good proportion of home carpet, rug and upholstery cleaners. Soap-based cleaners are provided as liquids, pastes or powders. With all of these types, the aim is to provide a good foamy lather; the suds being used as a sort of "dry shampoo" for the actual cleaning operation. Since water enters extensively into the use of such soap cleaners it is of prime importance to avoid excessive wetting of fabric and to remove the suds before moisture can penetrate too deeply.

Soap-containing liquid products are often designed for use as such, but usually they require dilution with water prior to application. Comparatively easy to prepare, such cleaners can readily be made by mixing a suitable lathering soap with water. Indeed, the simplest of all soap-based rug and upholstery cleaners is said (3) to be a 1 per cent solution of potash coconut oil soap in water. From the sales angle, however, it is advisable to provide a much more concentrated soap solution. Small (4) suggests a product made by dissolving 4 per cent of a potash coconut oil soap in water. To be diluted with about three parts of water before use, such a product can be pleasantly tinted by the use of a small proportion of any suitable water-soluble dye.

A bit more complex, but undoubtedly more efficient is a cleaning solution made by mixing: (5)

	Per Cent
Coconut oil soap	12.0
Ammonia (28%)	2.8
Glycerine	7.9
Water	77.3

Such a solution combines several effects in addition to that provided by the soap alone. Ammonia not only increases the cleansing action, but appears to brighten some colors. The glycerine lends a certain amount of brightness or sheen to the cleaned areas, but of equal importance is its action to provide a softer "handle" or feel to the cleaned fabrics.

Not so widely used are the soap jellies or pastes made by dissolving a suitable proportion of mild soap in water to give a product of the desired consistency. Some of these soap jellies are intended for direct application. Spread sparingly over a small area at a time, the jelly is worked up to form

uniform suds by the use of a dampened cloth, brush or sponge; the foam should be cleaned off quickly to prevent too deep penetration. Other paste products are added to water in sufficient quantity to provide the requisite sudsing solution. The following preparation, (4) for example, is employed by adding about three ounces to half a gallon of water:

	Per Cent
Soda soap	20.0
Soda ash	0.5
Water	79.5

A rather old fashioned soap paste product for cleaning color-fast carpets that have been badly soiled by grease or oil has been listed by Forrester (6) and more recently by Crowley. (7) It is made from:

Fuller's earth	4 parts
Turpentine	1 part
Potassium carbonate	8 parts
Soft soap	enough to make a paste

While powdered dry soap could probably be sold as such for carpet, rug and upholstery cleaning and renovation, it is more common practice to combine the soap with other useful compounds, such as trisodium phosphate, soda ash or the like. This naturally leads to a consideration of the part played by alkalis in the formulation of these products.

THERE is no doubt but that trisodium phosphate is the most important of the alkali components. Though occasionally suggested as being suitable by itself as a rug and upholstery cleaner, trisodium phosphate is usually employed as an adjunct to soap or other detergents in making these products. It is, for example, a frequent ingredient of the increasingly popular powdered cleaners, of which the following may be considered a typical example: (5)

	Per Cent
Naphthalene	1.0
Borax	30.0
Trisodium phosphate	15.0
Soda (tallow) soap	54.0

Small, who questions the value of borax in such preparations, lists a powdered cleaner consisting of:

	Per Cent
Soda soap	77.5
Soda ash	15.0
Trisodium phosphate	6.0
Oil of cedar leaf	1.5

Products of this type are preferably dissolved in hot water before use; the suggested proportions being about one heaping tablespoonful per quart of water. Of interest in this connection is a powdered carpet cleaning product for home use patented some years ago and said to contain: coarse granules of white neutral soap, granulated borax, trisodium phosphate crystals, sodium sesquicarbonate crystals, powdered ultramarine blue and cedar oil. (8)

Stock soaps used in commercial wet-cleaning processes employ soap-trisodium phosphate mixtures. (9) Similar combinations, suitably modified, are used in home products formulation, as in the following solution, which is applied undiluted: (4)

	Per Cent
Potash stearate soap	0.6
Potash coconut oil soap	0.6
Trisodium phosphate	0.6
Ammonia (26°Be)	0.5
Water	97.7

The recent patent literature describes a series of new alkali-utilizing carpet and rug cleaning compounds owned by or assigned to one of the leading alkali producers. Differing somewhat in detail, the patents (10, 11, 12) cover various compounds to be dissolved in water before use, consisting essentially of dry stable calcium hypochlorite containing over 50 per cent of available chlorine and substantially free from calcium chloride, together with soda ash in excess of that necessary to react with all of the calcium present. A water-soluble synthetic detergent, such as sodium lauryl sulfate is also included in the composition. Obviously intended for commercial use, these patents are of interest as an indication of new developments in the carpet and rug care field.

WHERE grease, oil and other fatty stains or dirt are chiefly responsible for the grimy appearance of fabric floor coverings or furniture, a suitable solvent may be combined with soaps to yield more efficient cleaning and renovating compounds. Because they contain both water and an immiscible solvent, such products depend upon soap both as a detergent and as an emulsifying agent. Sometimes the soap is formed in the process of mixing the two phases; the fatty acid constituent being added in the "oil" phase and the saponifier in the aqueous phase. This is what occurs in the following rug cleaning composition; (7, 13) triethanolamine oleate being the soap formed:

	Parts
Oleic acid	28
Ethylene glycol monobutyl ether (Butyl "Cellosolve")	5
Ethylene dichloride	13
Triethanolamine	16
Water	125
Isopropyl alcohol	14

The oleic acid, ethylene dichloride and butyl cellosolve are mixed and then added to a solution made of triethanolamine and water with thorough stirring, and the alcohol added to make a clear solution. The product emulsifies in water and the emulsion made with an equal volume of water is recommended for rug cleaning purposes.

Very much along the same lines is another similar-use product, the consistency of which may be controlled by regulating the amount of water. In this case, however, ammonium oleate is formed by mixing the two phases: (5, 7)

	Parts
Diglycol oleate	44
Butyl "Cellosolve"	5
Ethylene dichloride	12
Denatured alcohol	15
Oleic acid	11
Ammonia (28%)	11
Water	45

Soaps, as such, may be employed in the formulation of soap-solvent cleaners; soft coconut oil soaps, hard tallow soaps, and the like being quite appropriate. A product of this type, used undiluted, is said (4) to contain:

	Per Cent
Soda tallow soap	2.0
Sodium metasilicate	0.5
Borax	1.8
Ammonia (26°Be)	0.5
Ethyl ether	1.5
Water	93.7

Synthetic detergents have also quite logically found their way into the formulation of carpet, rug and upholstery cleaning compounds. While efficient products may be prepared with these newer compounds, especially for use in hard water areas, their higher price is undoubtedly an important consideration in their wider utilization.

Upholstery materials cannot be expected to stand up as well as rugs and carpets under the stronger cleaning materials. Consequently where alkaline cleaners are used it is common to recommend higher dilutions for cleaning of upholstery.

Small's study of compounds based on synthetic detergents showed that one typical product consist of:

	Per Cent
Fatty alcohol sulfate	2.0
Trisodium phosphate	1.5
Alcohol	10.5
Water	86.0

Described as a concentrated foam cleaner, the solution is diluted 1:10 for carpets and rugs and 1:20 for use on upholstery.

CARPET and rug sweeping mixtures have a long and honorable history, and they are still far from being entirely displaced by newer products, especially in rural areas. Coarse salt used to be a favorite and fairly efficient sweeping compound for use about the home—and not so many years ago at that. Modified sweeping compounds consisting of mixtures of various ingredients to give more effective cleaning are available in the older technical books or their revised editions. (6) Only a few months ago, in response to an inquiry, a British magazine (14) republished a formula for one of these powdered preparations for cleaning and brightening carpets:

Sawdust	9 parts
Powdered sodium carbonate	1 part
Quillaia (soap) bark powder	1 part

The powder is spread over the carpet or rug and well rubbed in with a broom. The broom is then dipped in water and kept moist while the powder is thoroughly swept out; carrying adherent dirt with it from the pile of the floor coverings.

Modernized and brought up-to-date, these old time sweeping compounds have blossomed out under the guise of products for use with vacuum cleaners. Composed basically of various powdered ingredients of various mesh sizes to act as "absorbents" for the dirt. these newer carpet cleaners usually contain a volatile solvent to act against greases and oils. The use of these solvents means that adequate ventilation must be provided when such products are employed. The powders are spread over the rug in a thin layer and worked into the pile with a broom or stiff brush. After the solvent has evaporated, the vacuum cleaner is run over the rug, at first against the pile to loosen and remove the powder and then with the pile to give the final finishing touches.

Claimed to be quite efficient as carpet cleaners and said to have certain advantages and conveniences over wet processes, the recent patent literature offers several examples of these newer "dry" cleaners. One such, patented about five years ago, (15) is a rather complex combination described as consisting of:

	Pounds
Buckwheat flour (coarse ground)	100
Light petroleum cleaning oil	24
Aluminum stearate	2
Salicylic acid	2
Water	60

The salicylic acid serves as a preservative and, if desired, 2 pounds of a deodorizer such as pine oil can be included.

Two patents granted on the same day in 1944, describe other, simpler compounds. One of these, (16) a moist powder, is prepared by mixing 100 pounds of 200 mesh bentonite with 5.25 gallons of a solvent mixture composed of equal parts by weight of Stoddard solvent and carbon tetrachloride; this last added to reduce fire hazards. Fuller's earth or wood flour

may be used instead of the bentonite. The second patent, (17) granted on a product which is claimed to overcome any tendency toward lumping and to provide more even spread and penetration of the moist carpet cleaning powder, specifies the formulation of mixtures such as the following:

	Pounds
Bentonite (200 mesh)	65
Volatile organic grease solvent (flash point 100°F.)	25
Wood flour (60 mesh)	10

PRODUCTS intended primarily for upholstery, but probably useful on light rugs and carpets, have frequently been described in the literature. Antimacassars may be out of date, but many a modern housewife has wished that she had the courage to use doilies or similar protective decorations on the back of her upholstered chairs. Macassar hair oil may be unobtainable today, but brilliantines and other oily hair dressings are still very much with us and are still the leading causes of stains on upholstery chair backs. Perspiration and food stains are largely responsible for stains and grime on chair arms and other parts.

If the greasy stains or spots have not spread too far, it is sometimes possible to remove them by using a solvent, such as carbon tetrachloride. The following formula, given by Smither (9) of the National Bureau of Standards, has been suggested as a cleaner for silk, cotton, velour, velvet and plush upholstery. This preparation, which requires occasional shaking during use, is made by mixing the ingredients in the order given:

Stoddard solvent	½ gal.
Carbon tetrachloride	½ gal.
Turpentine	2 oz.
Denatured alcohol	2 oz.
Benzine (dry-cleaning) soap	½ oz.

Upholstery which has become rather generally soiled usually requires wet cleaning to achieve best results and avoid a spotty or uneven appearance. Often the use of suds made by dissolving a good grade of mild white soap in warm water will provide an acceptable cleaning job. Unquestionably, however, a product specifically designed for upholstery cleaning will give much better results. Coconut oil soaps and olive oil soaps are especially suitable as bases for such products because they can be removed readily from the fabrics, an important consideration where excessive wetting is to be avoided.

A practical, well-rounded formula for making an efficient upholstery cleaner, originally suggested by Edwards (18) and cited by Smither, is made from:

Pure olive oil soap	2 oz.
Pure coconut oil soap	2 oz.
Water	3 gal.
Glycerine	4 oz.
Borax	1 oz.
Ethylene chloride	2 oz.

The soaps are dissolved in hot water and the glycerine and borax added. When the solution becomes lukewarm, add the ethylene chloride. This solution may be used without further dilution.

Where a higher proportion of cleaning solvent seems indicated because of greasy or oily stains or especially bad soilage , an upholstery cleaner such as the following might be more suitable: (5)

	Per Cent
Coal-tar naphtha	27.0
Tallow soap	1.0
Triethanolamine oleate	1.0
Water	71.0

Formulas for more specialized cleaners like "heavy duty" products for use on automobile upholstery, canvas coverings and such, are also available. One product of this type contains: (4)

	Per Cent
Potassium oleate soap	12.5
Sodium metaphosphate	1.5
Sodium thiosulfate	0.1
Pine oil	10.5
Water	75.4

Brushed or rubbed into the soiled fabric surface and then wiped off, this product is used without further dilution.

A simple solvent-water emulsion, developed in France, is described by Small as being particularly suitable for cleaning automobile upholstery soiled by tar, oil, grease or other stubborn soil, not ordinarily amenable to soap alone. It is made from:

	Per Cent
Naphtha	27.0
Soap	0.8
Water	72.2

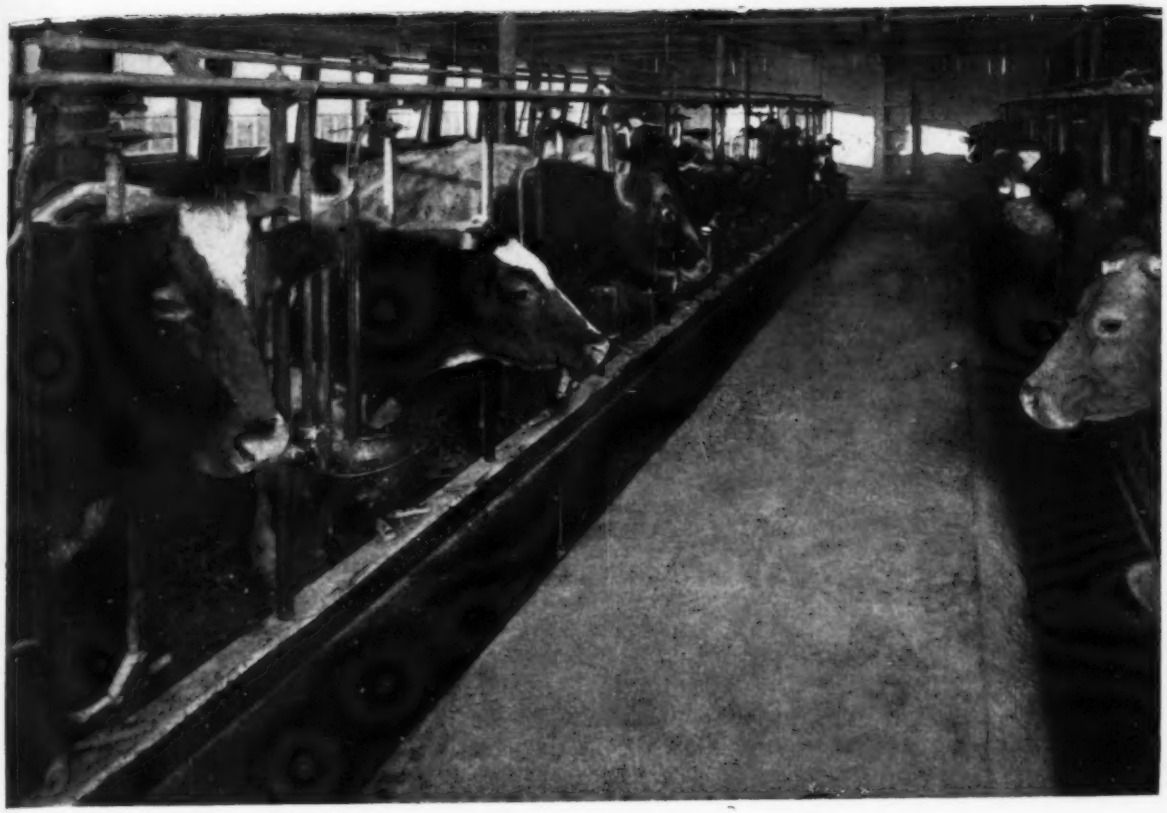
Carpet, rug and upholstery cleaners have definitely arrived and have found a firm place among modern home care products. The post-war period should find even further extension in the use of these products as well as improvements in their production and effectiveness. ★★

Bibliography

(1) Anon. Soap & Sanit. Chem. 20:25, (May) 1944.
(2) Wright, J. A.: Bull. Nat. Research Labs., Canada, June, 1944, No. 13.
(3) Anon.: Textile Colorist 65:377, 1943.
(4) Small, C. T.: Chem. Indust. 51:738, 1942.
(5) Bennett, H.: "Chemical Formulary," New York, Chem. Publ. Co.
(6) Forrester, G. P.: "Pharmaceutical Formulas." Vol. II, Ed. 10, London, Chemist & Druggist, 1934, pp. 514-5.
(7) Crowley, C. A.: "Money Making Formulas," Chicago, Pop. Mech. Press, 1939, pp. 71, 91-2.
(8) McComb, J. B.: U. S. Pat. 1,837,976, Dec. 22, 1931.
(9) Smither, F. W.: "Washing, Cleaning and Polishing Materials," Nat. Bur. Standards Circular C 424, Washington, 1939, p. 41.
(10) Mathieson Alkali Works: Brit. Pat. 526,647, Sept. 23, 1940.
(11) Kalusdian, V. M.: Canadian Pat. 403,650, March 24, 1942.
(12) Kalusdian, V. M.: U. S. Pats. 2,320,279; 2,320,280-1, May 25, 1943.
(13) Anon.: "Emulsions," New York, Carbon & Carbide Chem. Corp., 1934, pp. 52-3.
(14) Anon.: Chem. & Drug. 142:25 (July 1) 1944.
(15) Studer, C. W., Roshong, R. G. & Miller, M.: U. S. Pat. 2,165,586, July 11, 1939.
(16) Hopkins, G. E., Dow, J. N., & Peters, R. I.: U. S. Pat. 2,344,247, March 14, 1944.
(17) Rench, H. D.: U. S. Pat. 2,344,268, March 14, 1944.
(18) Edwards, G. H.: Starchroom Laundry J., Aug. 15, 1934, p. 63.

Sulfonyl Bromide Derivatives

A saturated hydrocarbon, its derivative or a mixture of several saturated hydrocarbons, which is normally liquid such as cetane, is made to react with a gaseous mixture of SO_2 and bromine in a ratio of 1-20:1, but preferably 2.5-3.5:1, at a temperature of 30-80° C. The reaction zone is irradiated with ultraviolet light from a mercury arc and with the rays from a 60-watt light bulb. The cetane is placed in a quartz flask provided with a reflux condenser, and the reaction is continued for seven hours, after which the product is hydrolyzed and neutralized. Extraction gives dried flaky products useful as surface-active agents. A. L. Fox to E. I. du Pont de Nemours & Co. U. S. Patent No. 2,346,568.



Special Cleaners for the DAIRY PLANT

A REVIEW of the requirements of cleaners for use in the dairy plant is contained in an article by Perry E. Piper in the September, 1944, issue of *The Milk Dealer*, entitled "Practical Aspects of Dairy Plant Cleaning." Mr. Piper, who is connected with Beatrice Creamery Co., Bloomington, Ill., emphasizes that the prime requisite in a dairy plant cleaner is water softening ability. In this connection he comments that the addition of some of the new poly-phosphates to dairy cleaner formulas over recent years has been a long step in the right direction. Tetra sodium pyrophosphate, as well as sodium tetra-phosphate have, when obtainable, been used to good advantage by washing powder manufacturers since their introduction a few years back. After the war an expansion in the use of these products in the field of cleaning preparations is looked for.

"Water composition varies greatly in different parts of the country," Mr. Piper reminds. "Some plants have extremely hard water, while the water supply of other plants is very soft. Some plants soften part of the water used, others all, and still others, none of it. The magnesium and calcium salts in the water constitute a major problem in most localities. When water is heated, the bicarbonates are converted to carbonates and a precipitate results. The precipitate is very fine and settles to the bottom, where it has a tendency to cling tightly to the sides and bottom of the vat. The same magnesium and calcium will combine with the fat and produce insoluble soap deposits which may be more of a problem than the original soil.

"Addition of various cleaning compounds to the wash water results in several types of reactions. Soda ash and caustic soda form scale; tri-sodium phosphate and metasilicate form a sludge; while the use of the newer poly-phosphates tends to keep the magnesium and calcium salts in a non-active solution. This holding up of the water hardening salts is a very important characteristic of a good washing compound as it permits a more efficient usage of the cleaning properties of the chemicals.

"At ordinary temperatures up to 140° F. the addition of sodium terra

phosphate or tetra sodium pyro-phosphate will soften water without a visible precipitate. In general, the acid phosphates (those that are in P_2O_5 group) are more effective in sequestering and preventing the formation of calcium salt precipitates than are the alkaline phosphates. However, it has been found that the alkaline group are more effective in use against the magnesium salts.

"It has been found that almost without exception the total hardness of water is divided into two parts calcium and one part magnesium when tested for soap hardness. So in devising a washing compound, it is necessary to take this into consideration.

"Another characteristic of the poly-phosphate group is their ability to remove previously formed deposits of carbonates and silicates. This property is of great merit, especially in conditions where the use of . . . acids and other lime solvents is impractical or impossible. The use of these products in the soaker-type bottle washer will aid greatly in the elimination of lime deposits and the prevention of their formation.

"We might mention in this connection, that these products are quite effective as deflocculating agents in the free rinsing of washing compounds. It is recommended that up to 10 per cent of poly-phosphate be used in the washing powder to prevent the formation of the skum and curd deposit so often left on the equipment as a result of the precipitation by the alkali of the salts in the water and in the food product that was processed in the equipment."

THE second characteristic of a good washing powder, says Mr. Piper, "is that it must have high *wetting ability* or the ability to remove the surface film that occurs on all surfaces when they become wet. This is in reality the reduction of the surface tension. This is particularly important in washing powders, as a powder that will wet the surface and wet the soil will allow the solution to get under the soil, or dirt, and loosen it from the surface so that it can be washed away. You may have a washing solution that has the power to cut casein and the power to emulsify the fat, and yet it may lack the ability to penetrate into the dirt and get next to the surface you are trying to clean. . . . Before any cleaning solution can attack the greasy, fatty film left on equipment it must penetrate this more or less waterproof layer of contamination. It takes a great deal of brushing with old-time cleaners to penetrate this film of soil physically. The modern cleaners which have wetting ability will do this by contact alone.

"There are many wetting agents on the market—most of which have been restricted because of use in war industries, but at the rate required to do a satisfactory job there are still enough of these products available to do a great deal of good and be of great help to the dairy and food processing industry. Some chemicals have a degree of wetting ability in themselves, but most of them require the assistance of a wetting agent to do a really efficient job of cleaning. More common of the agents—products that put the head on washing solutions without using soap—are sulfonaated alcohol and acid salts of poly-alkylene polyamine.

"It is expected by many people who should know, that after the war newer developments in cleaning and cleaning compounds will be centered around wetting agents, and coupled with their natural high germicidal and detergent ability there is much evidence to support this view."

THE emulsifying ability of a powder is described by Mr. Piper as another factor which is very important in the cleaning of dairy equipment. "The greasy, fatty film that is left on equipment will be removed more easily," he counsels, "if we can separate this film into smaller particles and surround each particle with a layer of solution so they may be carried away with the rinse water. In connection with this, there is also a certain degree of saponification of the fat in which the fatty materials and oily materials are broken down and converted into soap or soap-like products, and which must be mixed with the alkali of the washing powder and then carried away with the rinse water.

"A great deal of the efficiency of the clean up and wash up job," reminds Mr. Piper, "depends upon the rinsing of the equipment. Therefore, free rinsing is a very important characteristic of a good washing powder. The loss of luster in stainless steel, and to a great extent the formation of milk stone, is due to the failure of the operator to do a good job of rinsing. This may not be his fault, but in any case the failure to rinse well, to remove the products of the washing process, will result in an unclean piece of equipment. We may be able to see the dirt, or it may be invisible dirt and contamination in which millions of bacteria are harbored. This free rinsing problem has been the primary factor in the development of modified alkalis, as free caustic, which really does the washing, will not rinse well, and it is necessary that it be supplemented and modified by another chemical.

"All in all, the secret of good and efficient cleaning of dairy equipment depends upon the operator knowing not only the correct method, but also he must use the *proper amount* of the proper kind of powder and the proper amount of water at the proper temperature.

"Contrary to most practice, a temperature of 110 to 120 degrees F. is best suited to the dairy clean-up chore. This is about as hot as you can comfortably stand on your hands. When 145 degrees F. water, or hotter is used, the emulsion of fat particles is broken and the fat boils off; the curd particles are dried out and settle to the bottom of the vat and milk stone is readily formed.

"Many washing compounds are very corrosive at the higher temperatures. Alkalilike tri sodium phosphate and sodium meta silicate are definitely corrosive at 150 degrees, whereas at 120 degrees they are only mildly so.

"This does not mean that hot water should not be used to rinse the equipment. The hotter the water used as a rinse, the faster the surface will dry and the more completely the surplus cleaner is removed.

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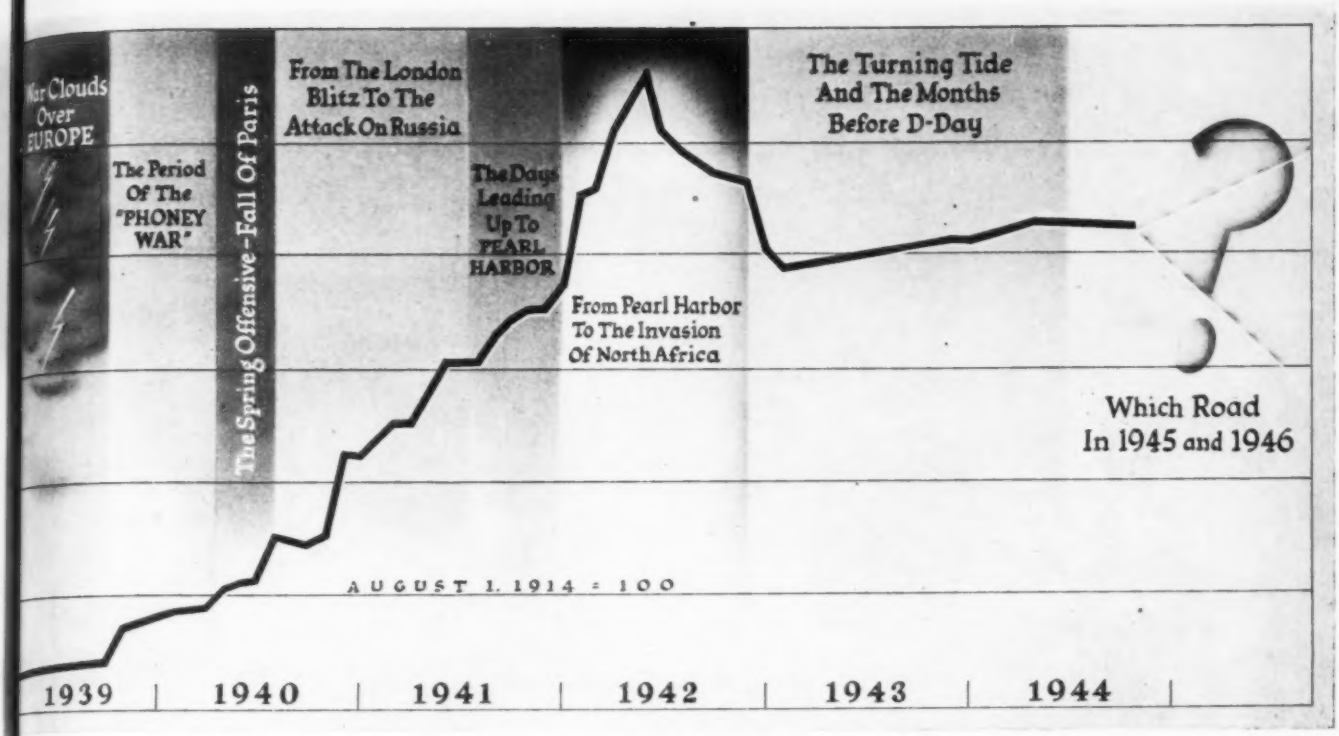
War Clouds Over EUROPE
The Period Of The "PHONEY WAR"
The Spring Offensive - Fall Of Paris
From The London Blitz To The Attack On Russia
The Days Leading Up To PEARL HARBOR
From Pearl Harbor To The Invasion Of North Africa
The Turning Tide And The Months Before D-Day
Which Road In 1945 and 1946
AUGUST 1, 1914 = 100
1939
1940
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1944

ESSENTIAL OIL OUTLOOK

by Edward Sagarin

Givaudan-Delawanna, Inc.

As we approach the end of another year, it should be helpful for users as well as importers of essential oils to stop and take stock. Again it is time to ask ourselves—what is the outlook for replenishing our sadly diminished shelves in the coming year? Where do we stand today with respect to Italy and Sicily, Madagascar and Reunion, Grasse and Comores? It is time to look at the essential oil map of the world, from the military and diplomatic point of view, never losing sight of the ever-changing nature of a dynamic world situation, and neither blinded by an optimism rooted only in hope nor by a pessimism born of five years of discouragement. It is time, in a word, to take a rapid trip around the world, to see the jasmin of liberated France, the oakmoss on the battlefields of Yugoslavia, and the citronella, still many miles but perhaps not many months from the men of MacArthur.

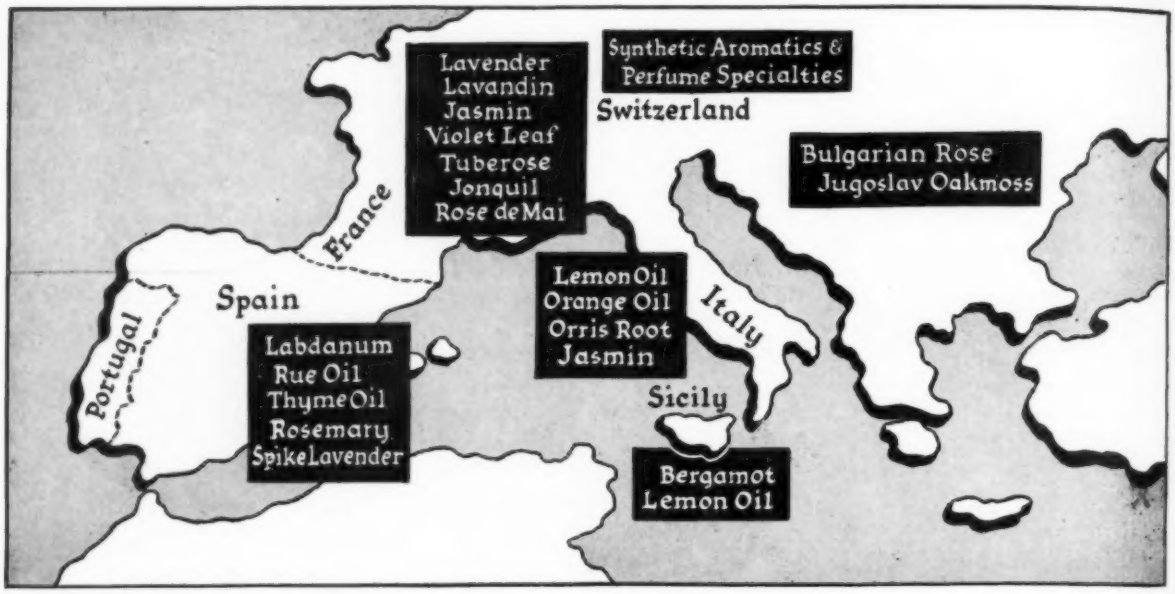
Most confusing in this world picture is the sad and war-torn peninsula of Italy, from whose soil the German army, at this moment, has not yet been completely driven. Northern Italy is still under German occupation, but the greater part of that land is now a co-belligerent, a new term in the history of warfare. Co-belligerency seems to be a point of equilibrium on the pendulum where the ex-enemy, trying to swing to the Allied side, has been stopped. Side by side, in Italy, we have the Allied Military Government and the regime of Premier Bonomi.

The essential oil industry looks to Sicily for bergamot and lemon oils, and to the Italian mainland for orris root and some jasmin. Italian lemon oil has been in a class of its own. Urgently needed by the armed forces of this country, American government agencies undertook at the earliest possible moment to have 155,000 pounds shipped here. The first 100,000 pounds went entirely for military use. The second and smaller shipment is to be sold to the trade in the near future. The amount allocated for sale to any single customer will be based on pre-war import figures.

Of bergamot, we had heard little but rumors, until the middle of October, when it was announced that a shipment, equivalent to about one year's normal supply, had arrived in this country, and would be sold to the historical importers on a basis similar to that used in the distribution of lemon oil. The price of the oil has not yet been set, nor is the quality known.

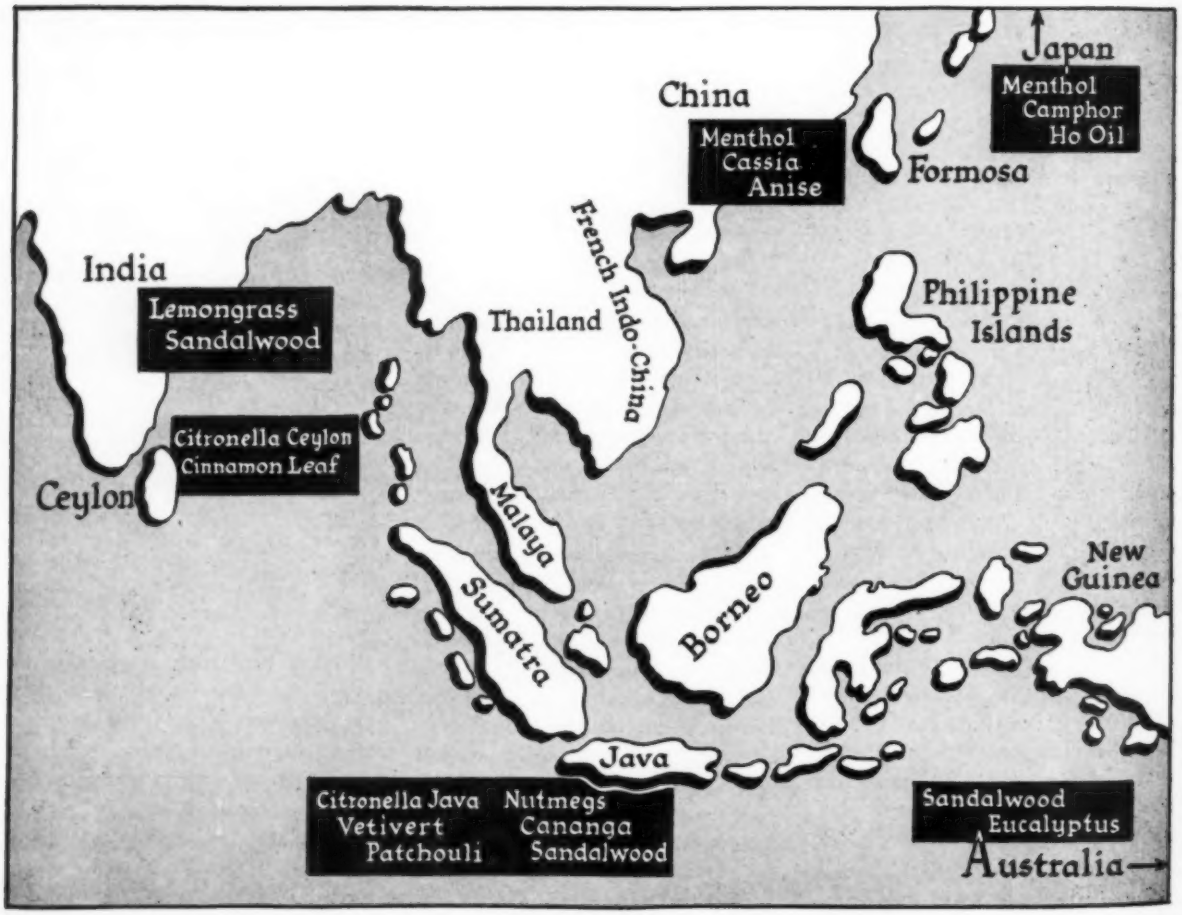
It is said that the plantations remained intact in Sicily during the war, and production continued with little interruption. If this is so, then the bergamot oil may not be of a recent harvest. Bergamot, far from improving with age, will deteriorate, and it is hardly likely that such a product, if in existence, would command much respect on the American market.

ESSENTIAL OILS — ROUND THE WORLD



↑ Europe and the Mediterranean

Asia and The Far East ↓



Of the present status of orris root and Italian jasmin, even less is known. The coming weeks, however, may throw some light on the subject. For the Treasury Department has lifted the ban against commercial business communication with liberated Italy, and although we may be unable to consummate a transaction, it might become possible to gain information on stocks available, quality and prices.

It is doubtful that the Italian situation will clarify itself before the termination of European hostilities and the establishment of stable economic conditions thereafter. Once shipping is abundant, and cables, postal and telephone services open to Italy, the groundwork can be laid a little more easily for essential oil exports to the U.S.A. But there will still be matters much more urgent, imports and exports that will take precedence, financial and credit difficulties. And there will still be a war against Japan, lest we forget.

FRANCE is not less of a question mark than Italy. A man returning from France, not at all versed in essential oils and perfumery, reported that he had been in the city of Grasse after its liberation, and found it in good condition. Damage, he said, had been negligible.

At this moment, no one in America knows what has happened to the production of floral oils in that part of the world. One rumor has it that the culture of these plants was abandoned in favor of vegetables to relieve a drastic food situation, and another report, of unknown origin and unconfirmed, tells us that production continued with little interruption. The large number of women workers in this industry would give it a better chance to live than many of other French industries, suffering as that land did from an acute manpower shortage during the occupation.

For purposes of export from a neutral country, products originating either in France or in Italy are today considered *of enemy origin*. Until this dictum has been changed, the blockade will make it impossible to receive such French and Italian flower oils as may have found their way to Switzerland, Spain or Portugal.

Let no one obtain the impression, however, that in the neutral countries such products are abundant and inexpensive. Quotations on bergamot oil in Europe are about $13 a pound; on lemon and orange $7 and $10 respectively. Orris root is completely unobtainable.

Jasmin absolute is quoted in Europe at prices ranging from $660 to $1,100 a pound, depending on quality, and the chassis is not quoted at all. Tuberose is $550, jonquil about $230, neroli petales almost $300, rose de Mai about $500 and a first-class Bulgarian rose at $550. It is felt in the trade that these prices will decline with the reopening of normal commercial relations, but it is generally believed that they will not crash to 1939 levels.

The outlook for products from the Balkans, Yugoslav oakmoss and Bulgarian rose, in particular, is not too favorable. The war in the Balkans is still raging. And when it is over, as it will be before long, the occupation authorities will be representatives of the U.S.S.R. Information will be difficult to obtain, and shipments no easier.

ACROSS the Mediterranean, in the liberated colonies of North Africa, there are said to be small stocks of valuable oils, but commercial and diplomatic difficulties have thus far made it impossible to receive imports. Permission to import has not been forthcoming in Washington, and export licenses have been withheld by the French, who may be preserving these oils for their own consumption in an effort to rehabilitate French economy. Ordinarily, North Africa does not play a decisive role in the world essential oil production, but in a desert a trickle of water is a turbulent flood to a parched throat.

Somewhat more encouraging has the situation in Madagascar and Reunion become. Reunion, it will be recalled, is the little island off Madagascar, whose oils still bear the pre-revolutionary appellation of Bourbon. These French colonies gave their allegiance to the Vichy government, and were subsequently invaded by the British after the outbreak of the Far Eastern war had made them an easy mark for Japan's then expanding military prowess. To this day, Madagascar remains governed by British administrators, and no doubt the relinquishing of this power to DeGaulle's men is a matter on which Allied diplomats are burning their midnight oil.

Reunion, rich in vetivert and geranium and ylang; Madagascar, supplier of cloves and vanilla beans, for a long time made no shipments to this country. Some months back, the road for export to the U. S. was finally cleared. A first boat finally arrived here from Madagascar. And a second, laden with oils, steamed off, only to go down as a casualty of the war, an undeserved anti-climax to four years of blockade.

In the Pacific, we have not yet touched the richest essential oil land in Japan's newly conquered ephemeral empire, the Dutch East Indies, and particularly Java. Among other oils, we obtain citronella Java, vetivert, patchouli, cananga, nutmegs and a little sandalwood from these islands. It would, in the writer's opinion, be the better business judgment to write off the possibility of obtaining these Java oils in 1945. As for 1946, that is too far off even for a wild guess.

OF the newer essential oil developments in the Western hemisphere, it can probably be said that only South America, and particularly Brazil, will remain seriously in this market after the war. Brazil, like the United States, is a land rich in a variety of soil and climatic conditions, and unlike our own country, has labor available at a price not entirely out of line with Sicily, for instance.

The production of peppermint oil in Brazil has been a very real contribution toward alleviating the shortage. There has been some Brazilian vetivert and petitgrain, and one observer reports seeing Brazilian jasmin. Brazilian bergamot, which has been sold on the American market, is allegedly not obtained from the bergamot fruit, but is a mixture of the oils of

(*Turn to Page 77*)

Photo by John Loughlin

The Way It Looks in Washington

C. H. JENKINS

WASHINGTON—The latest development on the Washington scene this month is the revocation of WFO-38, the Palm Oil Order, by the War Food Administration, October 23. This is the fifty-ninth War Food Order to be terminated and continues the good record which the WFA has established in discontinuing controls as soon as they are proved to be unnecessary. This was the case with WFO-38. Since all palm oil imports are purchased by the government, and allocations to approved users are made by WFA, the order had simply outlived its usefulness.

Extend Inventory Suspension

Another recent action of the WFA extends until March 31, 1945, the period during which inventory limitations (WFO-67) on tallow and grease have been suspended. The previous suspension of inventory controls on tallow and grease was due to expire November 1, but the recent action of the WFA extends for an additional five months the period during which soap makers may build up their inventories of tallow and grease without regard to former restrictions.

Coconut Oil Outlook Dark

Less coconut oil has been given soap makers for fourth quarter use, and the shortage of high lauric acid content oils is still the number one supply problem facing the industry. The news of the landing in the Philippines is of course encouraging from a long term view, but coconut oil users should not be optimistic as to any early receipt of Philippine oil. It will be many months before we even know what the Japs have done to the plantations, and whether there are any substantial stocks of copra or coconut oil in the islands, and surely an even longer period before any oil from the Philippines can be expected to reach the United States.

10,000,000,000 lb. Fat Crop

Production of fats and oils from domestic raw materials is expected to reach approximately ten billion pounds in the 1944-45 season, according to a recent issue of "The Fats and Oils Situation," publication of the Bureau of Agricultural Economics. This compares with 11,300,000,000 lbs. in the previous crop year. The decline results from a 25 to 30 per cent reduction in the 1944 pig crop and a reduced flaxseed acreage. In spite of the decline the anticipated ten billion pound production of fats and oils would still be two billion pounds above the 1939 output. Stocks of tallow and grease in the hands of soap makers are believed currently to be approximately 150 million pounds above last year's comparable figures, while soap makers also hold heavy supplies of lard, approximately 100 million pounds. Production of tallow and grease is expected to drop in 1944-45 from the 1943-44 record level, but will still be above output for normal years.

Soap Stocks Improving

The latest check by the WFA on availability of soaps in retail outlets throughout the country indicates that, except for yellow bar soaps, the distribution picture is improving. Yellow bar production has been expanded, and demands of the army are now being met. It would seem probable, however, that consumers will find yellow bars scarce for some time to come. Army yellow bar needs, however, would not be expected to have any effect on availability of other types of soap in civilian channels.

WFO-42 Rewritten

As anticipated in these columns last month, WFO-42, the fat and oil use order, was rewritten and issued in new and simplified form early in October. WFO-42 now applies only to

users of fats and oils in edible products, WFO 42a to use in protective coatings, coated fabrics and floor coverings, and WFO 42b to use of fats and oils in soaps. All quota users of fats and oils under the three orders are required to report their quarterly consumption direct to WFA. For the third quarter of 1944 filing date has been pushed back to November 15 for form FDO-42-5, but for future quarterly reports filing deadline is the 20th of the month succeeding the end of the calendar quarter. Users of fats and oil in soap are allowed 10,000 lbs. per calendar quota over and above their quotas, but this may not be used until the quarterly quota has been consumed. Unused portions are forfeited at the end of each quota period. For the period ending March 31, 1945, fish oil may be used without restriction if the manufacturer deducts the amount of fish oil he included in determining his base period use. Vegetable oil foots may be used on the same basis as washed recovered linseed oil, charging only 50 per cent of the amount used against quota. Previous quota limitations of 90 per cent for package and bar soaps, and 110 per cent for bulk package soaps are retained. (Base period is an average of 1940-1941 use.)

Containers Continue Problem

Shipping containers are still, along with manpower, the problems which are worrying the soap maker even more than availability of raw materials. A new amendment to L-317 restricts the use of fibre drums for shipping of soap. Fibre drums are permitted only for shipment of metallic soaps and when packed in drums of five gallons or more "soap, powdered, flaked, or paste, but not in cakes or bars."

The following copy of a letter addressed by Gillam Soap Works to the Office of the U. S. Army Quartermaster at Jersey City outlines one soap maker's problem in the shipment of soap and contains a possible workable solution to the container shortage.

Jersey City Quartermaster Depot
14 Exchange Place
Jersey City 2, N. J.

ATTENTION J. S. MacINTOSH, CONTRACTING AND PROCUREMENT OFFICER:

Dear Sir:

The government has been seeking bids on one hundred million pounds of ordinary, laundry bar soap, Federal Specifications PS-591-A and because of shortage of labor, cooling capacity, etc., our firm is unable to supply any additional amount to our present commitments and we assume that this also applies to most of the other soap manufacturers; however, we have a boiling capacity, stock and facilities sufficient to produce fifty to one hundred thousand additional pounds per month, if and provided we were permitted to furnish the same in four-ply used paper bags.

To explain our position will say that this is exactly the same quality of soap as we are now furnishing you under present contracts, but instead of running the soap into frames, permitting it to cool, cutting it and putting in boxes as we now do, we would propose to run the hot, soft soap into these four-ply used paper bags, which will hold from 90 to 135 pounds, allow the soap to cool or solidify in the bags and ship it in a solid block of soap. The soap is just as good soap, however not quite as convenient as in boxes cut into the one pound bars, but would be just as serviceable and in fact more economical since with the elimination of putting the same into frames, cooling, cutting and boxing, we could reduce our price very close to 3/10 of a cent on the pound.

The bags that we propose to use are the bags in which we receive soda ash, T.S.P., and other alkalies and since the same have a moisture resisting section and the soap becomes very hard, we are of the opinion that this soap would stand overseas shipment in fairly good condition and if the soap is as urgently needed as we are led to believe they will be very glad to receive it. Of course, they will have to cut the soap themselves and can do so in any size blocks they so desire. I don't believe that they would waste any of it!

It might also be possible to run this same soap into boxes or barrels; however, this would increase the cost over that of the paper bags mentioned above.

We would be very glad to hear from you promptly regarding this matter and since we used this same method to furnish our laundry trade during the soap shortage two years ago, the writer would be very happy to pass on what information and experience we have had along this line to other manufacturers who could help supply you this soap in bulk as outlined above.

It also occurred to me that you might if necessity required resort to bulk soap for some of your other needs.

Yours truly,

E.O.G.

EOG:JW GILLAM SOAP WORKS

Raise Used Container Prices

Early last month OPA announced a new schedule of prices for used shipping containers which advances ceilings approximately 43 per cent. Containers may now be sold by weight, number of square feet or area. Eliminated from the new order are ceilings for containers sorted by size and brand name, and the transportation differentials.

Up Glass Container Quotas

Quotas of glass containers for packaging shampoos, liquid and hand soaps and shaving creams have been increased to 130 per cent from the old figure of 100 per cent of the number of new glass containers used in 1943. Glass container quotas for medicinal soaps have been dropped.

More Tin for Tooth Paste

Amendment of WPB order M-115 is expected shortly to allow dentifrice manufacturers to use unlimited quantities of either aluminum or lead tubes with 3 per cent tin content.

No Solvents for Cleaners

Dry cleaners cannot expect any trichlorethylene or perchlorethylene, cleaning solvents, during November, the War Production Board announced late in October. It is expected, however, that a small amount of carbon tetrachloride will be made available to dry cleaning establishments for November, WPB explained. Increased military demands for these solvents, especially for metal degreasing purposes, as well as various difficulties in producing trichlorethylene and perchlorethylene, are responsible for the shortage of these solvents, WPB officials said.

Goodwin Solventol Sales Mgr.

H. A. Goodwin has been appointed director of sales of the Solventol Chemical Products, Inc., manufacturer of industrial, household and commercial cleaners, Detroit. For the past sixteen years Mr. Goodwin has been associated with the Continental Can Company, New York, and until recently served that organization as director of sales development and advertising.

RAW MATERIALS

FOR THE SOAP AND ALLIED INDUSTRIES

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COCOANUT OIL

CAUSTIC POTASH

STEARIC ACID

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METASILICATE
OXALIC ACID
POTASSIUM CARBONATE
SAL AMMONIAC
SALT
SAL SODA
SILICATE OF SODA
SODA ASH
TRISODIUM PHOSPHATE

CASTOR OIL
COCOANUT OIL
CORN OIL
COTTONSEED OIL
LARD OIL
NEATSFOOT OIL
OLEIC ACID - RED OIL
OLIVE OIL
OLIVE OIL FOOTS
PALM OIL
PALM KERNEL OIL
PEANUT OIL
RAPESEED OIL
ROSIN
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TRADE NEWS. . . .

Katz Leaves Manhattan Soap

Israel Katz, western plant manager of Manhattan Soap Co., New York, resigned this position as of November 1. Mr. Katz had been with the company since 1940. Before joining Manhattan Soap Co., he had been general manager of J. Eavenson & Sons, Camden, N. J. He has long been a well known figure in the soap industry, having served as a director of the Association of American Soap & Glycerine Producers and as president of the Industrial Soap Association. He is currently acting as a member of Committee D-12 of the American Society for Testing Materials which is concerned with the development of specifications and test methods for soaps and detergents. Mr. Katz's future plans have not yet been announced.

ISRAEL KATZ

Processing Oils Group Meets

The following officers and directors were elected at the annual meeting of the Processing Oils and Chemicals Association, held Oct. 17, at the Hotel New Yorker: Fred C. Scholler, Scholler Bros., Philadelphia, president; Victor H. Berman, Onyx Oil & Chemical Co., Jersey City, vice-president; H. B. Sweatt, secretary-treasurer; and F. C. Scholler, Scholler Bros., Philadelphia, chairman; Ernest Nathan, Warwick Chemical Co., W. Warwick, R. I.; L. L. Grombacher, Standard Chemical Products, Inc., Hoboken; L. E. Schoeder, Atlas Refinery, Newark, N. J.; H. B. Dohner, Amalgamated Chemical Corp., Philadelphia; H. A. Harrison, A. Harrison & Co., Pawtucket, R. I.; G. A. Goulston, George A. Goulston Co., Scituate, Mass.; V. H. Berman, Royce Chemical Co., Carlton Hill, N. J.; J. M. McChesney, Leatex Chemical Co., Philadelphia; C. M. Braham, Arkansas Co., Newark, N. J.; D. S. Whiteman, Reilly, Whiteman, Walton Co., Conshohocken, Pa.; and P. E. Breer, Ritter Chemical Co., Amsterdam, N. Y., directors. The meeting centered around a discussion of the current raw material situation and the postwar outlook. The organization, which was originally formed in 1931 as the Sulphonated Oil Manufacturers Assn., changed its corporate name in 1931 to broaden the scope of its activities.

Geo. Case Joins Tech Soap

George N. Case, for the last twenty-eight years associated with the manufacture and chemical supervision of vegetable oil soaps, lubricating oils and allied lines, has taken complete charge of the manufacture of Tech Soap Company's line of vegetable oil soaps, liquid cleaners, sprays and deodorants.

In Mr. Case's experience, he has pioneered several products that have been instrumental in the progress of soap uses and application. He was one of the first soap men to make use of pressure filters for filtering of liquid soaps and is experienced in the installation of liquid soap storage, pumping and aging equipment.

In leisure moments, Mr. Case is a volley ball enthusiast, having coached the Duncan Y.M.C.A. team of Chicago to a national championship, and after transferring to North Avenue Y.M.C.A., continued to two more championships.

Chas. Fishbeck Joins Uhe

Charles Fishbeck, vice-president of P. R. Dreyer Inc., New York, for the past six years has just joined the firm of George Uhe, Inc., New York, where he will have charge of the essential oil department. He succeeds George Briasco who resigned because of ill health. Mr. Fishbeck has spent the entire thirty-two years of his business life in the essential oil field. He was sales manager for Ungerer & Co., serving with the company for twenty-four years. He left Ungerer in 1936 to organize his own company which he operated for two and a half years. His firm was taken over by P. R. Dreyer Inc. in 1938 and he has served as vice-president of P. R. Dreyer since that time.

CHAS. FISHBECK

McKelvey Advances Richardson

H. C. Richardson, who has been sales manager of Alfred D. McKelvy Co., New York, manufacturers of "Seaforth" toiletries for men, since Jan., 1942, was recently appointed vice-president and general manager. A former toiletries buyer for Donaldson's Department Store, Minneapolis, Mr. Richardson joined the McKelvy organization in 1940 as West Coast representative.

French Aromatic Industry

American manufacturers of perfuming materials were advised that "the perfumery business did not suffer materially" in France and Paris, during the German occupation, according to a statement released last month by R. M. Stevenson, sales manager of Givaudan-Delawanna, Inc., New York essential oil firm. "The French domestic essential oil industry evidently has been supplying Paris with whatever raw materials could be produced," Mr. Stevenson declared, and added that "presumably those synthetic aromatic chemicals not derived from unobtainable essential oils, have also been available; perhaps they have been produced in France, or imported from Germany. Certain essential oils (valuable as raw materials for isolates and derivatives) originating in the French colonies: Madagascar, North Africa, etc., may very well have found their way into France," he continued. Mr. Stevenson then went on to say: "However raw materials were obtained, the French perfumery position seems to have been maintained to a large extent and the former severe competition of French products in American markets is likely to be resumed early in the postwar period." No mention was made in the statement of possible damage to sources of essential oil and aromatic chemical materials resulting from enemy or Allied action in France.

E. C. Perkins, 67, Dies

Eugene C. Perkins, 67, treasurer of Perkins Soap Co., Springfield, Mass., died there Oct. 17. A native of Meredith, N. H., Mr. Perkins was a resident of Springfield for the past 48 years. In 1916, he formed Dunker & Perkins Co., in Boston, and, in 1924, he organized Perkins Soap Co., manufacturers of textile soaps, of which firm he has been treasurer since. Mr. Perkins was a 32d degree Mason and was a member of the Colony Club and Longmeadow Country Club. Funeral services were held at the funeral parlors of Dickinson-Streeter Co., Springfield, Oct. 19, and burial took place in Hillcrest Park Mausoleum. Surviving Mr. Perkins are his wife, a son, George C. Perkins, of Longmeadow, and three grandchildren: Patricia, David and Elizabeth Perkins.

F. C. Allen, of D. & O., Dies

Frederick C. Allen, 72, for many years treasurer of Dodge & Olcott Co., New York essential oil firm, died Oct. 22, in Brooklyn. He had been with the company 55 years up until his retirement in Feb., 1942. Regarded highly for his ability as a credit man, Mr. Allen was also treasurer and a trustee of Memorial Presbyterian Church, Brooklyn, where he was a member for many years. In his early days, Mr. Allen was active in the militia, eventually becoming First Lieutenant in the old 23rd Regiment of the New York National Guard.

5,000,000 lbs. "Calgon" to Army

Calgon, Inc., Pittsburgh, have just announced that they have recently been awarded another contract for 5,000,000 lbs. of "Calgon" for delivery to the U. S. Army Quartermaster. Almost 95 per cent of "Calgon" is now said to be going to war uses.

Final Boston BIMS Golf Outing

Charles H. Slater, of J. T. Baker Chemical Co., Phillipsburg, N. J., won both low gross and grand prize at the third and final golf outing of the BIMS of Boston, held Oct. 18, at Charles River Country Club. Low net was won by Edward Aldrich of United Drug Co., and the kickers was won by Dave O'Connell, manager of Howe and French, Inc., both of Boston. A number of other prizes were given out, according to an announcement issued by Pete Niles, Fritzsche Bros., Inc., chairman of the BIMS of Boston.

Babbitt Grandson Dies

Frederick E. Hyde, 69, retired explorer and son of the late Dr. F. E. Hyde, and the late Mrs. Ida Babbitt Hyde and a grandson of the late B. T. Babbitt, founder of the soap firm bearing his name, died of a heart attack, Oct. 10, in his home at Watchung, N. J.

Deupree on Safety Council

R. R. Deupree, president of Procter & Gamble Co., Ivorydale, O., was one of fifteen industrialists added to the enlarged board of directors of the National Safety Council, according to an announcement made during the National Safety Congress in Chicago, last month.

George L. Ringel, 66, Dies

George L. Ringel, vice-president and director of Fritzsche Bros., Inc., New York essential oil firm, died Oct 3, at Mt. Carmel Hospital, Columbus, O., where he was being treated for a heart ailment. He was 66. A native of Cincinnati, Mr. Ringel had been with the firm for almost 44 years, having joined it upon completion of his studies at the Cincinnati College of Pharmacy. He covered Ohio and adjacent territory in the mid-west, was eastern sales manager for the firm and manager of Fritzsche Bros. of Canada, Ltd. Mr. Ringel was a member of the Ohio Voluntary Cavalry of Spanish American War Veterans, Rotary Club, U. S. Senior Golf Assn., the Ohio Society of New York and various Masonic bodies. He was also a life member of the South Atlantic and Southern Drug Clubs, as well as various trade associations. He is survived by his widow: Mrs. Helen J. Ringel, of Columbus; a brother, William M. Ringel, of Amelia, O.; and a sister, Mrs. Joseph De Coursey of Santa Ana, Calif. Services were held at Schoedinger Funeral Home, Columbus, on Oct. 5.

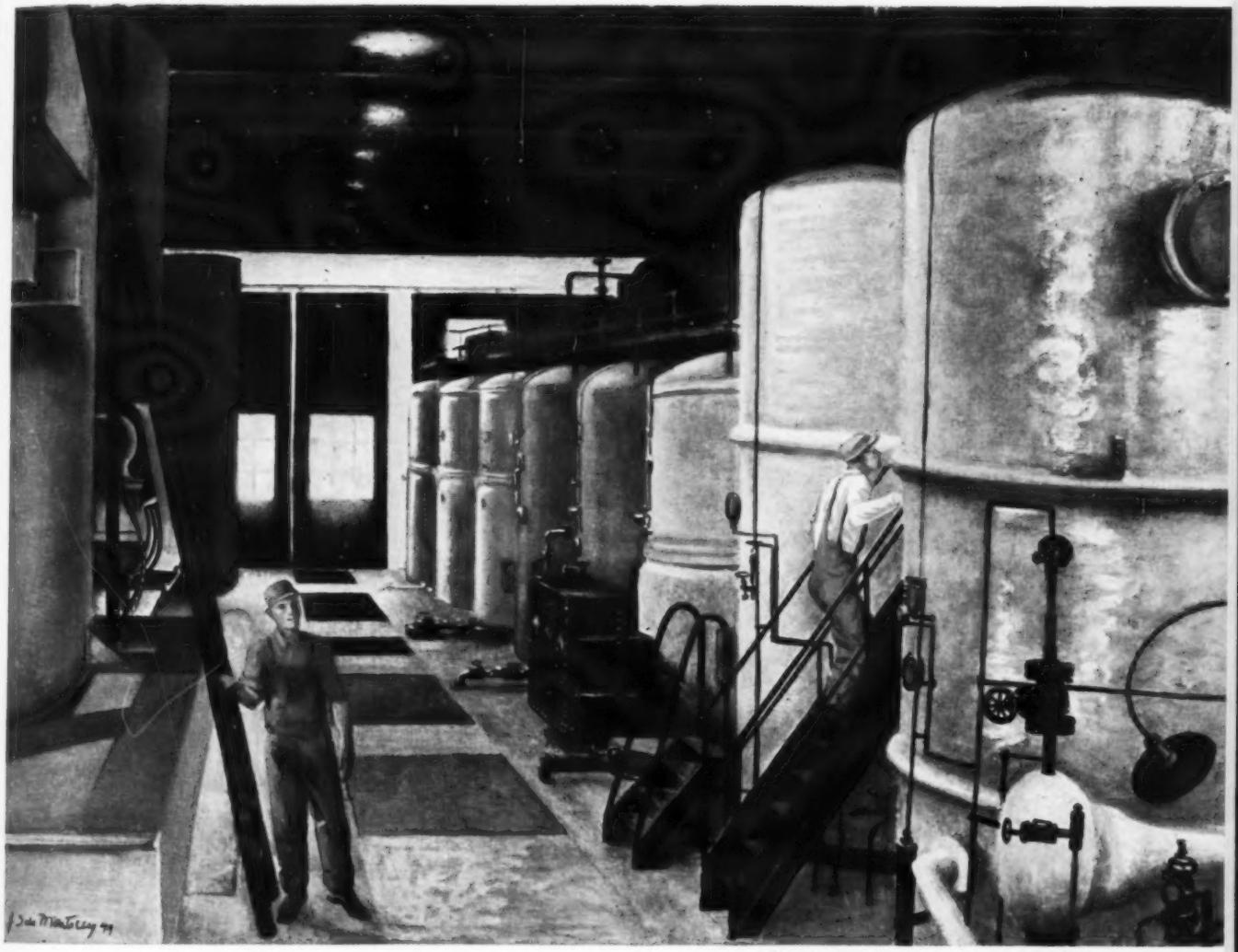
Oneida Chemical Moves

Oneida Chemical Co., Utica, N. Y., recently moved to 331-335 South Street, where the company has taken greater space, enabling it to carry a more complete stock.

Fred Beyer, Dreyer, Recovering

Fred Beyer, vice-president of P. R. Dreyer Inc., New York essential oil and aromatic chemicals firm, has been ill since Sept. 19, and is now recovering at Passaic General Hospital, Passaic, N. J.

Timely Experience . . .



Section of Caustic Evaporators at Niagara Alkali Plant

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CAUSTIC POTASH • CAUSTIC SODA • PARADICHLOROBENZENE • CARBONATE OF POTASH • LIQUID CHLORINE

American Oil Chemists Meet

A RECORD attendance of over 200 was reported at the opening session of the American Oil Chemists' Society's 18th fall meeting in Chicago, Oct. 25, while subsequent registrations brought the attendance figure for the conference close to the 500 mark. As usual, the opening session was devoted to presentation of papers concerned with chemical developments in the soap and glycerine field. Foster Dee Snell, of the research company bearing his name, presided.

Particular interest this year was attached to a report on the Fatty Oil Industry in Canada prepared by F. H. Lehberg, deputy oils and fats administrator of the Dominion's War-time Prices and Trade Board at Ottawa. Unfortunately, urgent war business prevented Mr. Lehberg from appearing in person, but his paper was read in his absence by another. Although Canada, in the past has produced less than 50 per cent of her fatty oil requirements, pressure of the war emergency has brought substantial increase in production of fats and oils of animal, vegetable and marine types, Mr. Lehberg reported, and the looming threat of famine which existed in the early years of the war has been eliminated, he said. Increased production and rigid controls, he explained, were the factors chiefly responsible for the improved situation. Discussed also, were technological improvements, new commercial applications and other phases of the parade of progress in this field in our neighboring allied country.

Of interest also was the presentation by D. B. Keyes, Office of Production Research and Development, Washington, D. C. of a proposal that pilot plants and even commercial plants be erected at government expense to provide the highly essential know-how in this country of all major developments that may be of use during war, "even though in some cases, there is no reasonable assurance that plants based on these developments can operate economically after the war is ended." "This would mean," said Mr. Keyes, "that from an insurance standpoint, we would be protected in any future emergency as far as the particular chemical in question is concerned."

Still a third paper presented at the soap session dealt with the research pool sponsored by government agencies which developed butanediol, a new polyhydric alcohol, which can be made into butadiene, a base for synthetic rubber. The process, it was pointed out by A. J. Liebmann, Schenley Research Institute, Lawrenceburg, Ind., could function as a reserve method in case other processes for producing butadiene should fail.

Included among the other papers dealing more directly with soap chemistry were the following: "Heat Absorption on Mixing Water with Powdered Soap," by Morris Mattikow, Refining, Uninc., New York City; "Detergency Studies at Low Solution Concentrations," by J. C. Harris and Earl L. Brown, Monsanto Chemical Co., Dayton, O.; "Water Softening Characteristics of Tallow, Soybean, Cocoanut Oil and Rosin Soaps," by E. E. Ruff, Lever Bros. Co., Cambridge, Mass., "Antiseptic and Antibiotic Properties of the Keryl Benzene Sulfonates," by Lawrence H. Flett, National Aniline and Chemical Co., Buffalo, N. Y.

M. L. Sheely, assistant general superintendent, Armour & Co., also presented to the soap session the report of the Soap Analysis committee, detailing accomplishments of the program during the past year.

H. L. Roschen, research chemist with Swift & Co., and chairman of the Society's publicity committee, announced an important decision reached by the Society's Board of Governors. The Committee on Analysis of Commercial Fats and Oils, has been instructed to expand its program to cover all new fields of oil chemistry so that standard methods of analysis can be developed and applied to the new products now being utilized in the soap field, just as this committee has developed analytical methods for the older fats and oils. The committee will act jointly with one from the American Chemical Society, he said. Included in the list of oils to be studied are castor oil, soybean oil, sunflower, linseed and others.

Klare S. Markley, chief chemist, Southern Regional Research Laboratory, New Orleans, and new president of the Society, presided over the general sessions of the meeting. J. J. Vollertsen, research director, Armour & Co., Chicago, was chairman of the Chicago committee of 19 members who made the plans for the meeting.

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Davies-Young Promotion

Davies-Young Soap Co., Dayton, O., has just issued two new pieces of promotional literature; one, a six-page folder of reprints of advertisements appearing in SOAP AND SANITARY CHEMICALS and featuring the "Flooradora Boys"; the other, the same series of advertisements combined in the company's house organ *Soap Specks*. Each advertisement, presented in highly readable and humorous style, is based on one of the four "Flooradora Boys: "Scrubby, Moppy, Rinsey and Waxey."

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Heesch Rejoins Hooker

Herbert Heesch, formerly of Heyden Chemical Corp., New York, recently rejoined the sales staff of Hooker Electrochemical Co., Niagara Falls, N. Y. He will cover the northern New Jersey area. Mr. Heesch is a 1932 graduate in chemical engineering of the University of Rochester. He joined the Hooker sales staff in 1933, serving the eastern states until 1937, when he joined Heyden.

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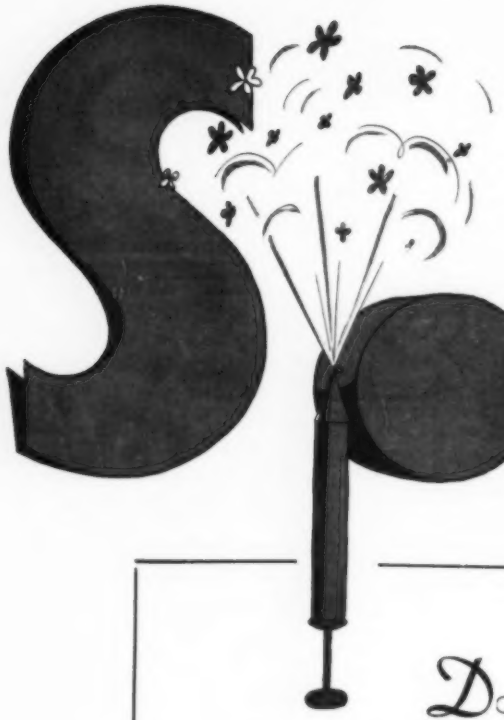
Stanley Returns To Victor

M. R. Stanley has resumed his duties in the executive offices of Victor Chemical Works, Chicago, after a term of service in Washington, where he was deputy chief in a special section of the chemicals bureau. Mr. Stanley has been affiliated with Victor for over twenty-one years, a company announcement stated.



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Do you want to neutralize or mask **effectively** the objectionable odor of your spray base or its toxicant? . . . Or would you like to give your finished product a delicately pleasant scent? The right answer to either of these problems—and the one precisely suited to your own specifications as to coverage, character and cost—can be found in the large selection of ready-to-use, low cost spray perfumes and deodorants developed by our laboratories. You may find just what you're looking for on Pages 234 to 236 of our Perfumers' Handbook and Catalog*. If you do, write us for samples; if not, tell us what you want and your limits of cost and we'll promise to furnish you a masking agent or fragrance exactly suited to your needs.

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FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

Show Soaps at Safety Congress

INDUSTRIAL America is becoming more "soap conscious," according to comment by exhibitors of industrial skin cleaners and other sanitation supplies at the National Safety Congress in Chicago last month. The new awareness of the need for properly formulated soaps, properly used, was attributed to the rigid sanitation standards set by Army authorities and the Public Health Service to protect workers in plants producing war materials.

Fourteen manufacturers of sanitation products participated in the Safety Congress trade show. Lightfoot Schultz Co., New York, displayed "Transol," recently developed sulfonated liquid skin cleaner for unusual industrial skin hazards, together with "Treet," a powdered hand soap for women workers, which was introduced at last year's safety show. Other soaps, formulated to meet particular factory and office hand cleaning problems were also displayed. Representatives included W. E. Pemberton, Chicago territory manager, O. O. Baddeley, A. J. Caldwell and A. C. Sorensen.

Lien Chemical Co., Chicago, specializing in sanitation hygiene and extermination products, displayed eight types of liquid soaps, abrasive, and heavy-duty soaps, protective creams, cleaning compounds, disinfectants, deodorizers and waxes. C. B. Lien, president, was in charge, assisted by J. R. Fillebrown, C. N. Kirkpatrick and Frank Nardi.

G. H. Packwood Mfg. Co., St. Louis, presented their familiar "Pax" line of industrial powdered soaps. Soap dispensers and cleansing creams were also shown. J. D. Compton, Chicago district manager, was in charge of the Pax booth. Mr. Compton was assisted by W. T. Schroeder and H. B. Lamping.

West Disinfecting Co., Long Island City, N. Y., distributed a recently issued 64-page booklet, "The Scope of Sanitation," which describes their production facilities, and varied sanitation products and services. Featured in the booth was "Lan-O-Kleen," a powdered hand soap, and a line of "Dermagard" protective garments for industrial workers. R. O. Jackson, Chicago manager, in charge.

Sugar Beet Products Co., Saginaw, Mich., displayed "SBS" skin cleansers and non-slip floor treatment preparations, in charge of F. A. Newberry, Chicago, and John H. Strickland, Detroit.

E. I. DuPont de Nemours & Co., Wilmington, stressed their "Protex No. 2," a newly developed water resistant protective cream, along with other company products. C. A. Weslager, sales promotion manager, was on hand from the Wilmington office, assisted by A. B. Van Sciver and R. K. Perrin, Chicago representatives.

Stepan Chemical Co., Chicago, promoted "pH 6," an oil skin cleaner, as "a new approach to the problem of factory hands." Mine Safety Appliance Co., Pittsburgh, also included in their varied line a protective cream, "Fend," for industrial use.

Milburn Co., Detroit, included their "Ply," protective cream and plastic safety clothing, and a new product, "Penathol," for athlete's foot control, which will be placed on the market shortly, according to H. Hunter Olney, in charge at the booth. Distribution will be handled by Penathol Laboratories, a newly organized division of the Milburn Co.

C. B. Dolge Co., Westport, Conn., displayed preparations for athlete's foot control, hand creams, protective clothing, washroom sanitation supplies and "Steridol," a cutting oil disinfectant. Staffing the booth were C. L. Weirich, C. A. Skinner and W. B. Helms.

Onox, Inc., San Francisco, was another exhibitor of an athlete's foot control preparation, "Onox" skin toughener, with James de Fremery, Leon C. Egner and James E. Lathrop, explaining the demonstrations made by a model.

In the floor maintenance field exhibitors included Oil Dri Company, Chicago, showing "Oil Dri" compound for absorbing oil on grease-soaked floors; and the W. H. Barber Co., Chicago, whose "Absorb-Oyl" floor compound is distributed by Surety Mfg. Co., Chicago.

Walter G. Legge Co., New York, demonstrated their non-slip floor polishes and floor treatment materials. And in the floor maintenance field the Finnell System Inc., Elkhart, Ind., showed floor care machines, scouring powders, mopping soaps and other products.

Franklin Research Co., Philadelphia, displayed waxes, soaps and cleaners for the floor, with a new product, "Colacet," for rendering textiles water repellant. Production is at present reserved exclusively for the Army, V. Bushmiller, Chicago sales manager, stated, but in post-war days an extensive promotion is planned for civilian use.

Swan Contest Announced

A contest, conducted by Lever Bros., Cambridge, to find a suitable name for the swan in "Swan" soap has just been announced. Prizes—507 of them—totaling $30,000 and a grand prize providing the sum of $100 a month for life or $20,000 in a lump sum are being offered to winners who find the first name for "Mama Swan" and in 25 words or less complete the sentence "I like 'Swan' Soap better because——." The contest runs two months ending Dec. 15.

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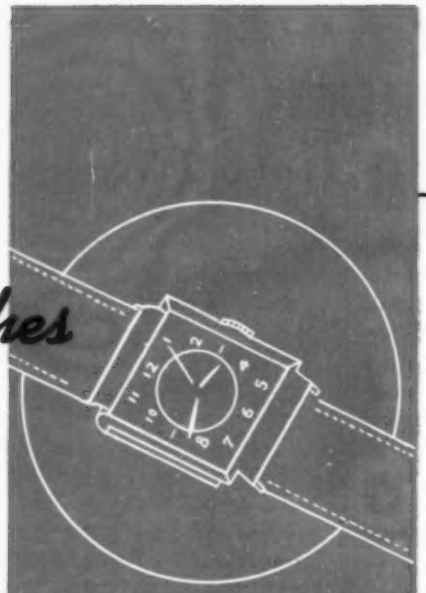
F. S. Drake Leaves P. & G.

F. Stoddard Drake, formerly of the advertising and promotion department of Procter & Gamble Co., Cincinnati, was recently appointed sales manager for Home Products Sales Corp., New York, selling organization for Taylor-Reed Corp., food processors.

CINCINNATI CRAFTSMEN
MAKE
WORLD-FAMOUS
Watches



It requires a skilled hand to form the delicate beating heart of a fine timepiece. Cincinnati craftsmen possess this talent in abundant measure.

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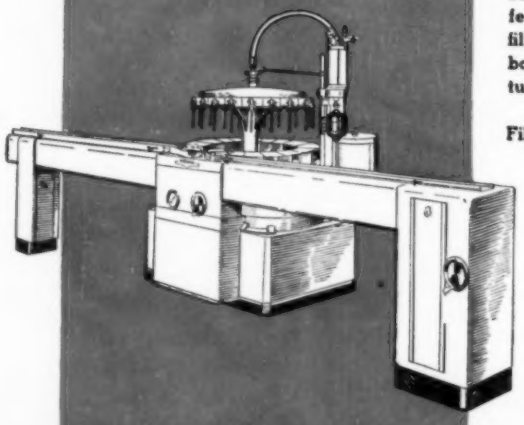
MAKE
WORLD-FAMOUS
Kiefer Filling Machines

For generations the handiwork of Cincinnati craftsmen has fully manifested itself in many avenues including the building of precision machinery. True artisans have for years given of their skill in the construction of Kiefer bottling and packaging equipment.



Completely automatic, semi-automatic, hand-fed equipment to clean, fill, close, convey jars, bottles, tins, collapsible tubes.

Filters Pumps Percolators

THE KARL KIEFER MACHINE CO.
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New York
Boston
Chicago
San Francisco
Seattle
Los Angeles
London, England

Stress Sanitation at Chicago Restaurant Show

SANITATION for the restaurant operator received impressive attention during the annual meeting of the National Restaurant Association in Chicago last month. An afternoon forum session was devoted to the subject with A. W. Fuchs of the U. S. Public Health Service as principal speaker, while in the accompanying trade show manufacturers presented their lines of soaps, dishwashing compounds and other sanitary chemicals.

The U. S. Public Health Service's recently organized project for assisting restaurants to train new employees, pays special attention to sanitation, including the nature and use of soaps and detergents. Recommendation of specific brands is rigidly avoided, according to F. T. Dubyne, officer in charge of the booth where the service was explained. Rather, he said, the subject is treated by classifying these cleaning agents in categories covering composition and purposes. Good qualities to look for in a compound are explained and simple tests taught for determining if a given product is suitable for use under conditions existing in a particular establishment, he stated.

Kelite Products, Inc., Los Angeles, making their first appearance at a mid-Western trade show, according to M. F. Brennan of the Chicago branch office, featured "KDL-27-A," washing powder for machine dishwashing and "Alkor," an odorless chlorine disinfectant. W. G. Nuelsen, sales manager and A. C. Lenz, advertising and publicity manager, assisted Mr. Brennan.

Wyandotte Chemical Corp., Wyandotte, Mich., promoted their "Keego" dishwashing compound, and "Sterichlor," for disinfecting and deodorizing in restaurants. A. C. Weimar, mid-West regional supervisor, in charge.

Economics Laboratories, St. Paul, Minn., and Chicago, featured "Super Soilax" and "Tetrax," for mechanical and hand dishwashing respectively. Demonstrators included E. Briel, regional supervisor, S. G. Lovejoy and Ralph Harland, Chicago salesmen.

Turco Products, Inc., Los Angeles, Calif., featured "Blu-Fax," a dishwashing compound, available in three forms, granular, commercial pellets and dispenser pellets. For the first time, also, at a trade show, a display was made of "Turco Grip-Wax," a recent development. E. J. Forbes, Chicago representative, was in charge.

Pittsburgh Chemical Laboratories, Pittsburgh, had an extensive display of chemical products for the food industry, including soaps, detergents, polishes for table and kitchenware, floor cleaners, bake pan cleaners, deodorants, fly sprays and others. George C. Schmidt, president, in charge.

The DuBois Co., Cincinnati, O., promoted "K O L," (knocks out lime) for dishwashing, "Neutraloid," a vegetable oil aluminum cleaner, "Temp," cream cleanser for porcelain, metal and other surfaces, floor cleaners, waxes, and other products. Chas. Du Bois, vice president, was in charge, assisted by over one hundred field representatives. The latter had assembled for a sales conference coincident with the restaurant convention. Post war sales promotion plans were launched during the meeting, and technical developments and trade conditions affecting the company's activities were the subject of the three-day meeting, it was stated.

◆

Chemical Salesmen Meet

The annual dinner meeting of the Salesmen's Association of the American Chemical Industry was held at the Midston House, New York, Oct. 19. A nominating committee consisting of Ralph E. Dorland, Dow Chemical Co.; Ira Vanderwater, R. W. Greeff, Inc.; Steve Urban, E. R. Squibb; Gerald S. Furman, Merck & Co.; E. J. McGuire, E. I. du Pont de Nemours & Co., Grasselli Chemicals Department; Carl O. Lind, Dow Chemical Co., and J. Robert Fisher, Fisher Chemical Co., New York, was elected. "Baptism of Fire," a War Department sound film dealing with actual war scenes was shown at the meeting.

◆

Du Pont Appointments

The appointments of Clifford McIntire as assistant to the general manager of Grasselli Chemicals Department and of T. H. McCormack as director of sales of the same department were announced late last month by E. I. du Pont de Nemours & Co., Wilmington. Mr. McIntire, former director of sales, has been with the company 34 years. A native of Wilmington, he received a B. S. degree in civil engineering from the University of Delaware. Mr. McCormack, who has been general assistant director of Grasselli sales, joined du Pont following his graduation from the University of Illinois in 1920.

◆

A. M. Ospenson Joins MM&R

Arthur M. Ospenson has joined the New York sales staff of Magnus, Mabee & Reynard, Inc., New York essential oil firm, it was announced late last month. He has been engaged in selling perfuming materials for a number of years, was with Mohegan Co. of New England, and later worked for printing interests which specialized in work for the drug, pharmaceutical and allied trades.

◆

Offer New Kitchen Deodorant

"A-K-O," a new kitchen deodorant was introduced in the Chicago market with large display advertisements in local newspapers last month. The product is manufactured by the A-K-O Co., of Elizabeth, N. J., and Chicago.

◆

Old Dutch Co. Moves

Old Dutch Industrial Products Co., formerly of 222-4 Tappan St., Kearny, N. J., recently moved to 533-5 Bergen St., Harrison, N. J. The company manufactures white shoe dressing and dyes.

As important as ammunition!

AN old line sergeant now in Italy told a war correspondent he spent a lot of time making sure rifles were properly cleaned and cared for in a training camp . . . but never had to worry about that at the front!

When a man's life depends on his rifle . . . he keeps it cleaned and oiled. That's why this container for rifle oil was designed to fit a pocket of the standard cartridge belt. A fighting man wants it with him all the time.

The American Oil & Supply Co. of Newark, New Jersey, packages its lubricating and preservative oil for the Ordnance Department in this container . . . made by Crown. It's not a highly decorative can . . . it's designed for concealment rather than display. But it is sturdily built to stand front line conditions—and that is where it goes!

Another example of how the Crown organization is doing a war production job that is a direct contribution to the success of American arms!

CROWN CAN

CROWN CAN COMPANY
NEW YORK • PHILADELPHIA
Division of Crown Cork & Seal Company
BALTIMORE, MD.

BIDS AND AWARDS

Hand Cleaner Bids & Awards

In a recent opening for miscellaneous supplies by the Treasury Department Procurement Division, Washington, D. C., the following bids were received on 10,008 pounds of hand cleaner cream: Fuld Bros., Baltimore, 33c per pound; Ditto, Inc., Chicago, 39c; MacIntosh & Sheridan, New York, 45c; Millburn Chemical Co., 34.7c, or $50 a gross; G. H. Packwood Mfg. Co., St. Louis, 38.5c, $3,853 lot; L. C. Smith & Corona Typewriters, New York, 39c; Wilco Co., Los Angeles, 38.8c, accepted, and Niagara Duplicator Co. 60c.

P. O. Cleaning Compound Bids

The following bids on 55 gallons of compound for cleaning multilith rubber plates, rubber blankets and rubber rolls in a recent opening for miscellaneous supplies by the Post Office Department, Washington, D. C., were received from: Addressograph Multigraph Corp., Washington, D. C., 55 gallon container $71.50, five gallon container, $7.75 each, and one gallon container, $2.30 each; and Alex C. Fergusson Co., Philadelphia, $1.85 a gallon.

Green Soap Award to Crystal

Crystal Soap & Chemical Co., Philadelphia, received the award on 30,000 pounds of green soap in a recent opening for miscellaneous supplies by the Veterans Administration Procurement Division, Washington, D. C. Crystal received the award on the basis of a bid of $3,180.

N. Y. Navy Wax Bids

Among the bids received in a recent opening for miscellaneous supplies by the New York Navy Yard, New York, on 1,700 quarts of liquid floor wax in five gallon containers were those of: Buckingham Wax Co., Long Island City, N. Y., 18.5c; A. L. Cahn & Sons, New York, 69.8c a gallon; Windsor Wax Co., Hoboken, N. J., 83c; Oil Specialties & Refining Co., Brooklyn, 83.5c a gallon; R. M. Hollingshead Corp., Camden, N. J., 84c a gallon; Uncle Sam Chemical Co., New York, 21c; Twin City Shellac Co., Brooklyn, 85c; Penetone Co., Tenafly, N. J., 22.25c; Fuld Bros., Baltimore, 90c and E. Rabinowe & Co., Yonkers, $1.20.

Navy Para Cakes Bid

Kleenaire Kemicals, Detroit, submitted the only bid of six cents on 20,000 three inch in diameter cakes of paradichlorobenzene in a recent opening for miscellaneous supplies by the New York Navy Yard, New York.

Navy Metal Polish Bids

Bids on 30,000 pints of noninflammable liquid metal polish in one pint cans were received from the following in a recent opening for miscellaneous supplies by the New York Navy Yard, New York: Ampion Corp., Long Island City, N. Y., 43.8c; Penetone Co., Tenafly, N. J., 46c; Fuld Bros., Baltimore, 47c; E. F. Drew & Co., New York, 70c; Crystal Soap & Chemical Co., Philadelphia, 48c; Sanitary Soap Co., Paterson, N. J., 65c and R. M. Hollingshead Corp., Camden, N. J., 64c.

Panama Canal Soap Bids

In a recent opening for miscellaneous supplies by the Panama Canal, Washington, D. C., the following bids and awards were announced in connection with various, unspecified quantities of different types of soap: Class 4, soap chips—Armour & Co., Babbitt, N. Y., or Chicago, $880; William Messer Corp., Jersey City, N. J., $1,112; National Milling & Chemical Co., Philadelphia, $840 and $870.40; Procter & Gamble Distributing Co., Ivorydale, O., $858.40 and $876; Pioneer Soap Co., San Francisco, $880, accepted; Colgate-Palmolive-Peet Co., Jersey City, N. J., $900.50; Class 5 Soap Powder—Kamen Soap Co., New York, $3,588; William Messer Corp., Jersey City, N. J., $3,480; Class 6 Scouring Compound—Imperial Products Co., Philadelphia, $177; Pioneer Soap Co., San Francisco, $210, accepted and Turco Products, Los Angeles, $225.

Special WFA Soap Purchases

Special soap purchases announced recently by the Office of Distribution of the War Food Administration, Washington, D. C., for shipment under Lend-Lease, and territorial food programs, Red Cross request, etc., include 160,000 pounds of laundry soap at $6.60 cwt and 216,000 pounds of laundry soap at $6.35 cwt from John T. Stanley Co., New York; 1,800,000 pounds of laundry soap at 6.39c per pound from Colgate-Palmolive-Peet Co., Jersey City, N. J.; 3,600 cartons of toilet soap at $5.15 a hundred cakes and 3,709 cartons at $5.80 a hundred cakes from Wilson & Co., New York; 200,000 cakes of toilet soap at 16.88c a pound from Allen B. Wrisley Distributing Co., Chicago; and 200,000 cakes of toilet soap at 16.432c a pound from Lever Bros., Cambridge, Mass.

P. O. Liquid Soap Bids

Among the bids received in a recent opening by the U. S. Government Printing Office, Washington, D. C., on 4,440 gallons of liquid soap were those of: Harley Soap Co., Philadelphia, 30.4c a gallon; Procter & Gamble Distributing Co., Cincinnati, 45c; Crystal Soap & Chemical Co., Philadelphia, 31c; Penetone Co., Teaneck, N. J., 35c and Chemical Manufacturing & Distributing Co., Easton, 36c.

Disinfectant Awards to Huggins

James Huggins & Son, Malden, Mass., submitted the low bid, of 60c on 560 gallons of disinfectant, which was accepted, in a recent opening for miscellaneous supplies by the Treasury Department Procurement Division, Washington, D. C.

Low P.O. Soap Bid

Standard Soap Co., Camden, N. J., entered the low bid of 6.34c on 79,880 pounds of laundry soap in a recent opening by the Post Office Dept., Washington, D. C.

Para-perfumes

for

paradichlorbenzene and naphthalene blocks

◆

We offer a wide range of attractive odors in this line of perfumes, carefully adjusted to the evaporation rate of the above blocks and crystals and available both with and without color.

◆

SCHIMMEL & CO., INC.

601 West 26th Street

New York (1), N. Y.

NEW TRADE MARKS

The following trade-marks were published in the October issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks

TEX-SPAR—This in upper case, stencil letters for solvent cleanser and detergent for floors. Filed Mar. 23, 1944 by Walter G. Legge Co., New York. Claims use since Mar. 1, 1938.

(A silhouette drawing of a man's head within a keystone)—This for metal and tile cleaners, and fluid soaps for wet and dry cleeaning. Filed May 4 by Pennsylvania Salt Manufacturing Co., Philadelphia. Claims use since Oct., 1941.

G-A—This in upper case, open letters for floor oil and grease remover. Filed June 9, 1944 by Gray Co., Minneapolis. Claims use since Nov., 1938.

SULFATERGENT—This in upper case, bold letters for detergents containing antibacterial substances. Filed June 10, 1944 by E. R. Squibb & Sons, New York. Claims use since June 5, 1944.

VEL—This in upper case, bold, extra black letters for sudsing cleaner and detergent. Filed June 27, 1944 by Colgate-Palmolive-Peet Co., Jersey City, N. J. Claims use since June 15, 1937.

MYRO — This in upper case, black bold letters for scorch and stain removing cleaning compounds. Filed July 8, 1944 by Myro Manufacturing Co., Milwaukee. Claims use since Mar. 10, 1944.

CERBINOL—This in upper case, bold letters for anti-bacterial and antiseptic preparations. Filed Oct. 18, 1943 by Cerbini Chemical Products Co., New York. Claims use since Jan., 1941.

LUSTA FOAME—This in upper case, bold letters on two sides of a bubble filled triangle for shampoo. Filed Feb. 19, 1944 by Lusta Foame Co., South Boston, Mass. Claims use since Jan. 1941.

FLAK—This in upper case, extra bold, black letters for insect spray. Filed June 2, 1944 by Wilbert Products Co., New York. Claims use since Jan. 3, 1944.

BRUNEX—This in upper case, bold letters for shampoo. Filed June 28, 1944 by Swedish Shampoo Laboratories, Long Island City, N. Y. Claims use since Sept., 1924.

MILBAC—This in upper case, extra bold, black letters for bactericidal and fungicidal compositions. Filed July 1, 1944 by Puratized, Inc., New York. Claims use since May 9, 1944.

KRYOCIDE—This in upper and lower case letters for pamphlet issued about every six weeks containing pest control recommendations dealing with the use of "Cryolite" containing insecticides. Filed Jan. 19, 1944 by Pennsylvania Salt Manufacturing Co., Philadelphia. Claims use since Nov. 26, 1943.

PERFON—This in upper case, extra bold letters for alkaline cleansing compound in powder form for the cleaning of milk cans, etc. Filed July 24, 1943 by Diversey Corp., Chicago. Claims use since June 3, 1941.

GOB WHITE STRIPE CLEANER —This in upper and lower case, script and block letters beneath the fanciful drawing of a sailor on a lined rectangle for clothing cleaner. Filed May 24, 1944 by Bob Sales Co., Spokane, Wash. Claims use since Feb. 15, 1944.

SKIMZOL — This in upper and lower case, extra bold, black letters for a cleaning compound for cleaning woodwork, and painted and enameled surfaces and fabrics. Filed Aug. 4, 1944, by Berry Chemical & Manufacturing Co., Chicago. Claims use since Apr. 17, 1944.

HILLTOP—This in upper case, bold letters for insecticides for delousing poultry, livestock and dogs, fumigants, disinfectants and deodorants. Filed June 15, 1944 by Hilltop Laboratories, Minneapolis. Claims use since 1939.

RAYDIZED—This in upper case, bold letters for insecticide. Filed July 10, 1944 by Vita-Var Corp., Newark, N. J. Claims use since May 15, 1944.

CHIKSOL—This in upper case, reverse letters on a diamond shaped design that carries the illustration of a baby chick. Shooting off from the four sides of the diamond are smaller reverse diamonds carrying drawings of a chicken, a turkey, a duck and a goose for louse powder and insecticides. Filed July 13, 1944 by Chiksol Products Co., St. Paul. Claims use since June 8, 1936.

PLAST-I-SHEEN—This in upper and lower case, bold letters for floor polishing waxes, etc. Filed July 1, 1944 by Fuld Bros., Baltimore. Claims use since Apr. 15, 1944.

RESISTAL—This in upper and lower case, script, extra bold letters for general purpose household cleaner. Filed Aug. 7, 1944 by Resistal, Inc., Chicago. Claims use since June 1, 1912.

WASHAV—This in upper and lower case, bold and extra bold letters for shaving soap. Filed Aug. 10, 1944 by Century Laboratory, Bremerton, Wash. Claims use since June 15, 1943.

OSYL—This in upper case, extra bold, letters for antiseptic and disinfectant preparation. Filed Mar. 8, 1944 by Lehn & Fink Products Corp., Bloomfield, N. J.

COPAPEL—This in upper case, bold letters for copper compounds for mildew-proofing. Filed July 17, 1944 by General Dyestuff Corp., New York. Claims use since June 21, 1944.

KONTREX—This in upper case, bold letters for cleaning compound in powdered form for washing bottles and other glass containers. Filed Apr. 17, 1944, by Diversey Corp., Chicago. Claims use since Dec. 28, 1943.

GRACO—G-A — This in upper case, open letters, the word "Graco" superimposed on the fanciful drawing of a bolt of lightning and above the letters "G-A" for material to remove oil and grease from floors. Filed June

learn more about PQ silicate detergency

DID YOU KNOW that five essentials of good detergency are available in *one* soap builder? Sodium silicate is this top-ranking builder of soap which has all *five* of these detergent essentials:

1. Wetting: Dirt films are quickly penetrated by these silicates.

2. Emulsifying: Silicates efficiently break up the oily film into small drops.

3. Dissolving Power: Silicates are good dissolving agents for alkali soluble dirt such as paints, proteins, etc.

4. Suspension: Removed dirt is suspended in the cleaning solution.

5. Preventing Re-Deposition: The soluble silica content of the silicates effectively prevents dirt and oil from re-affixing to the clean object.

Write for suggestions about your detergency problem or for data about the individual members of the PQ sodium silicate family. Over 50 different combinations of silica and alkali (Na_2O, $2SiO_2$ to Na_2O, $3.9SiO_2$) are here to meet your specifications for more detergent values per dollar.

Let us share our knowledge of the advantages of PQ silicates in your detergent. They are easy to work with; combine well with soaps, other alkalis, sequestering and wetting agents.

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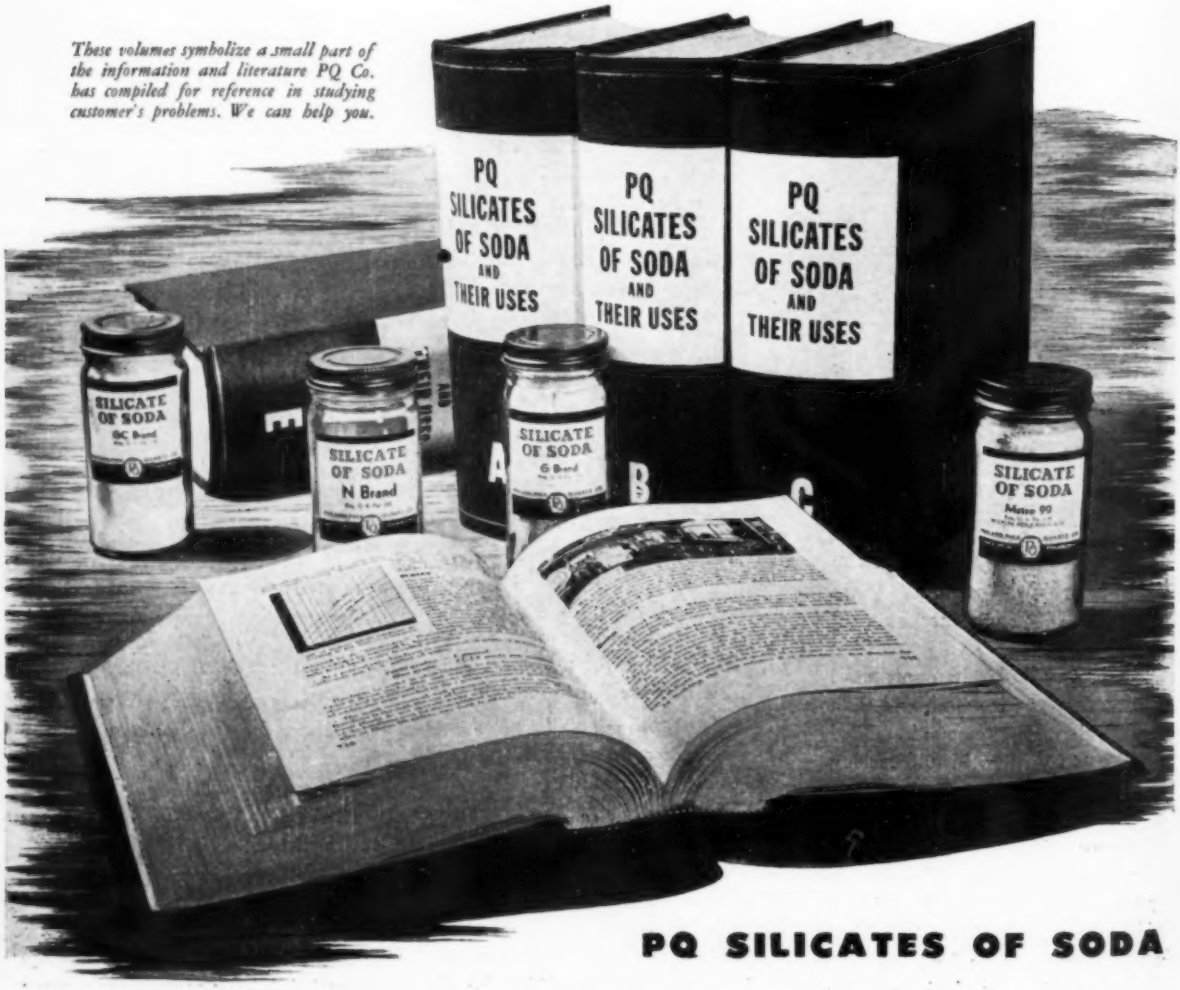
These volumes symbolize a small part of the information and literature PQ Co. has compiled for reference in studying customer's problems. We can help you.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WORKS: Anderson, Ind. • Baltimore, Md. • Chester, Pa. • Gardenville, N. Y. • Jeffersonville, Ind. • Kansas City, Kans. • Rahway, N. J. • St. Louis, Mo. • Utica, Ill.

9, 1944, by Gray Co., Minneapolis. Claims use since Nov., 1938.

MR. ZIP-ZIP—This in upper and lower case letters below the fanciful drawing of a man in evening clothes and above the words "The Wizard of Cleaning" for laundry and dry cleaning soaps and compounds. Filed June 10, 1944, by Nu-Pro Manufacturing Co., St. Louis. Claims use since May 1, 1944.

SURF-O-KLEEN—This in upper case, stencil letters for metal cleaning compound. Filed June 22, 1944, by Amalgamated Chemical Corp., Philadelphia. Claims use since Apr. 28, 1944.

ORGANITE—This in upper case, bold letters for detergents. Filed June 26, 1944, by Hauser Chemical & Supply Co., Toledo. Claims use since Mar. 1, 1944.

WHISPERING WILLOW—This in upper and lower case, script letters for shampoo. Filed July 21, 1944, by Morris Walhimer, New York. Claims use since Nov. 2, 1943.

MERITONE—This in upper case, bold letters for liquid floor wax and furniture polish. Filed July 11, 1944, by Merrit Products Co., Paris, Tenn. Claims use since June 29, 1944.

Trade Marks Granted

409,239. Cleansing material for general washing purposes. Filed by Wyandotte Chemicals Corp., Wyandotte, Mich., Dec. 3, 1943. Serial No. 465,497. Published July 18, 1944. Class 1.

409,261. Metal cleaner. Filed by Copper Clad Products Co., Rome, N. Y., Apr. 18, 1944. Serial No. 469,438. Published July 18, 1944. Class 4.

409,263. Scented garment cleaner. Filed by The Williams Co., Kokomo, Ind., Apr. 26, 1944. Serial No. 469,713. Published July 18, 1944. Class 4.

409,291. Insecticide. Filed by Plunkett Chemical Co., Chicago, Feb. 3, 1942. Serial No. 450,694. Class 6.

409,312. Insecticide. Filed by George F. Hutter Co., Buffalo, Sept. 10, 1943. Serial No. 463,594. Published July 25, 1944. Class 13.

409,327. Toilet soap. Filed by Milkmaid, Inc., Paterson, N. J., Mar. 1, 1944. Serial No. 467,896. Published July 25, 1944. Class 4.

409,335. Rat and roach exterminator. Filed by De Pree Co., Holland, Mich., Mar. 17, 1944. Serial No. 468,377. Published July 4, 1944. Class 6.

409,340. Insecticide. Filed by Ferd Staffel Co., San Antonio, Tex., Mar. 24, 1944. Serial No. 468,640. Publisheed July 4, 1944. Class 6.

409,349. Sodium hypochlorite solution used as cleanser, antiseptic and germicide. Filed by Silver Seal Products of Oklahoma, Inc., Barnsdall, Okla., Apr. 10, 1944. Serial No. 469,214. Published July 4, 1944. Class 6.

409,350. Insecticides, fungicides and compositions for controlling parasites, of animal origin, such as aphids and other insects. Filed by Nuodex Products Co., Elizabeth, N. J., Apr. 11, 1944. Serial No. 469,234. Published July 18, 1944. Class 6.

409,358. Soap. Filed by Procter & Gamble Co., Cincinnati, Apr. 20, 1944. Serial No. 469,511. Published July 25, 1944. Class 4.

409,365. Rat killer. Filed by Schutte Labs. Beaver Falls, Pa., Apr. 26, 1944. Serial No. 469,697. Published July 18, 1944. Class 6.

409,366. Product for destroying kitchen odors. Filed by Lucident Co., Elizabeth, N. J., Apr. 27, 1944. Serial No. 469,722. Published July 18, 1944. Class 6.

409,471. Cleanser disinfectants. Filed by Brondow Chemical Co., New York, Sept. 15, 1943. Serial No. 463,413. Published July 25, 1944. Class 6.

409,518. Cleaning compound for general household use. Filed by Dek Products, Inc., Baltimore, Apr. 3, 1944. Serial 468,955. Published Aug. 1, 1944. Class 4.

409,566. Dentifrice. Filed by Flur-O-Dent Co., Detroit, Apr. 22, 1944. Serial No. 469,582. Published July 25, 1944. Class 6.

409,594. Insecticides. Filed by Pennsylvania Salt Manufacturing Co., Philadelphia, May 4, 1944. Serial No. 469,941. Published July 25, 1944. Class 6.

409,607. Soap. Filed by Pinaud, Inc., New York, May 18, 1944. Serial No. 470,385. Published Aug. 1, 1944. Class 4.

409,660. Shaving soap. Filed by John Hudson Moore, Inc., New York, May 18, 1943. Serial No. 460,706. Published Aug. 31, 1943. Class 4.

409,685. Fungicide ointment. Filed by Smith-Dorsey Co., Lincoln, Neb., Mar. 3, 1944. Serial No. 467,952. Published Aug. 1, 1944. Class 6.

409,719. Preparation for the control of termites. Filed by R. D. Becker Co., St. Louis, Apr. 27, 1944. Serial No. 469,716. Published Aug. 1, 1944. Class 6.

409,733. Insecticides and fungicides. Filed by Stauffer Chemical Co., San Francisco, May 8, 1944. Serial No. 470,048. Published Aug. 1, 1944. Class 6.

409,737. Antibacterial preparations. Filed by E. R. Squibb & Sons, New York, May 11, 1944. Serial No. 470,117. Published Aug. 1, 1944. Class 6.

409,743. Shellac substitute. Filed by Twin-City Shellac Co., Brooklyn, May 16, 1944. Serial No. 470,319. Published Aug. 8, 1944. Class 16.

Controllers Elect Siddall a V. P.

Kelly Y. Siddall, controller of Procter & Gamble Co., Cincinnati, was recently elected a vice-president of the Controllers Institute of America at the 13th annual meeting of that organization. The Institute is a technical and professional organization of controllers devoted to the improvement of controllership procedure.

Win 1944 Safety Awards

Chipman Chemical Corp., Bound Brook, N. J., and American Cyanamid & Chem. Corp., Charlotte, N. C. branch, were winners of trophies offered by the National Safety Council in its latest plant accident reduction contest. Certificates of merit were also awarded to Wyandotte Chem. Corp., Michigan Alkali div., Lever Bros. Co., Hammond, Ind., plant, and Monsanto Chemical Co., Monsanto, Tenn., plant, for outstanding records in promoting employee safety. Awards were conferred during the National Safety Congress in Chicago last month.

The can that thaws out a ski-trooper... will keep your car from freezing!

● Imagine for a moment, please, that you're a ski-trooper. You're caught in a blizzard, cold and hungry. There's no dry wood about. How do you make a fire?

You just reach in your pack and take out a portable stove and a tin can. The can carries precious fuel which you pour into the stove through a special spout. In a few minutes you're cooking a hot meal.

Easy, isn't it? The can makes it so. And, like all cans, it's not only convenient, but strong and safe. It *completely* protects the ski-trooper's personal "anti-freeze."

● This can is only one reason why you seldom get anti-freeze in cans for your car today. But after the war you'll again get all the brands and types you want in sealed, tamper-proof cans . . . *completely* protected. We've a hunch you'll get even better anti-freeze, too.

To do our war job, we've developed new ideas and new skills. That's why, as we look ahead, we see *new and better things in Continental cans.*

NOTE TO MANUFACTURERS—We'll be glad to discuss present and future uses or improvements of your product or package. Write Dept. A., 100 East 42nd Street, New York 17, N. Y., or Continental Can Company of Canada, Limited, Sun Life Bldg., Montreal.

CONTINENTAL CAN COMPANY

NEW AND BETTER THINGS IN CONTINENTAL CANS

Awarded to Plant 78, Chicago • Illinois

ARMY E NAVY

SAVE TIN CANS—HELP CAN THE AXIS

RAW MATERIAL MARKETS

As of October 30, 1944

WITH a reduction in the total supply of fats and oils in prospect for the 1944-45 period, interest, next, naturally centers on the price structure of the market during that period. According to a forecast of the U. S. Department of Agriculture in a recent issue of its paper, "Fats and Oils Situation," "prices of vegetable oils, which are supported by the Commodity Credit Corporation guarantees, will remain at or near ceiling levels throughout the 1944-45 crop year." In the event of a possible ending of the European phase of the war in 1945, a "period of uncertainty" was predicted with regards to the fats and oils price picture, as well as a general tendency on the part of farm products to decline in price. There would also be fluctuations in the general price level of animal fats and lard, according to the outlook published by the Department of Agriculture.

Lard Selling at Ceilings

In addition to evidence brought forth by the Department of Agriculture that fats and oils sales for the remainder of the year and through 1944 will remain at or near ceiling prices, independent reports from Chicago indicate that most lard sales are now at ceiling prices. It is further stated that little unsold lard still remains and this in the face of good demand for the product and a lessened production. Government purchases seem to have slackened a bit in the past couple of months, although stocks are reported to have declined some 21 million pounds in September. In the first week of October an estimated 10 million pounds of lard was ordered by the government for delivery for some time in November and December.

Price Declines Temporary

Should there be a drop in animal fats in the "period of uncertainty" following V-E day, this would only be a temporary situation, the Department of Agriculture believes. The reason advanced for this is that the demand for fats and oils in 1944-45 will continue strong, while such important soap raw materials as lard will not be produced in as large quantities as in the previous year. It is expected that imported vegetable oils probably will continue in short supply. In this latter connection it is interesting to note that olive oil production in Argentina is reported to have been increased from

MIRAPON

A NON-CRITICAL SYNTHETIC DETERGENT WITH HIGH FOAMING AND WETTING PROPERTIES

[NOT SUBJECT TO SCHEDULE 44 W.P.B. ORDER M300]

POWDER — LIQUID — GEL — PASTE
REASONABLE QUANTITIES
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The Refined Tall Oil—

USED BY MANY SOAP PRODUCERS AS A ROSIN REPLACEMENT AND SUPPLEMENTARY STOCK

UNITOL SAPONIFIES MORE RAPIDLY THAN OTHER FATS AND OILS USUALLY EMPLOYED IN HARD SOAP FORMULATIONS

UNITOL ACCELERATES THE SAPONIFICATION OF OTHER FATS AND OILS IN SOAP FORMULATIONS

UNITOL IS ADVANTAGEOUSLY USED IN COMBINATION WITH OTHER FATS AND OILS IN THE PRODUCTION OF LIQUID SOAPS AND GELS

UNITOL HAS REMARKABLE DETERGENT PROPERTIES VALUABLE FOR DEGREASING SOLVENTS AND DISINFECTANT SOAP COMPOUNDS, ETC.

UNITOL IS READILY AVAILABLE AND AT LOW COST
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UNION BAG & PAPER CORPORATION
By-Products Dept.
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PLAN FOR MORE LIQUID SOAP SALES AFTER THE WAR.... *Sure* **— BUT HOW ABOUT NOW?**

WE all should plan for post war business and MOORE BROS. will be ready for you with practically everything you need in Dispensers and Soap Systems to help you get yours. BUT we also have to eat to-day . . . and that's where our PEER comes in—a non-leak, long-clog Soap Dispenser featuring Dependability of Operation, yet can be sold at a price that makes it easy for folks to switch over to sanitary liquid soap. Ask for literature.

MOORE BROS. CO.
Manufacturers of Soap Dispensers and Dispensing Equipment
100 WARREN ST., NEW YORK 7, N. Y.

41,141 gallons in 1942 to 169,087 gallons in 1943.

Rosin Ceilings Raised

Another soap raw material that came in for some attention during the past month was rosin. The present ceiling prices for gum rosin were advanced by 24 cents a hundred pounds, the OPA announced Oct. 12, in an effort to encourage production of this material, which is necessary to war production. Prices of all 13 grades, effective Oct. 11, are increased by specific 24-cents-per-100-pounds amount. The increase applies to all rosins sold on the Savannah Cotton and Naval Stores Exchange and to gum rosins sold off that exchange where the bulk of the sales take place. Ceiling prices were first established for gum rosin by the OPA effective Sept. 20, 1944.

Copper Sulfate Ceiling Raised

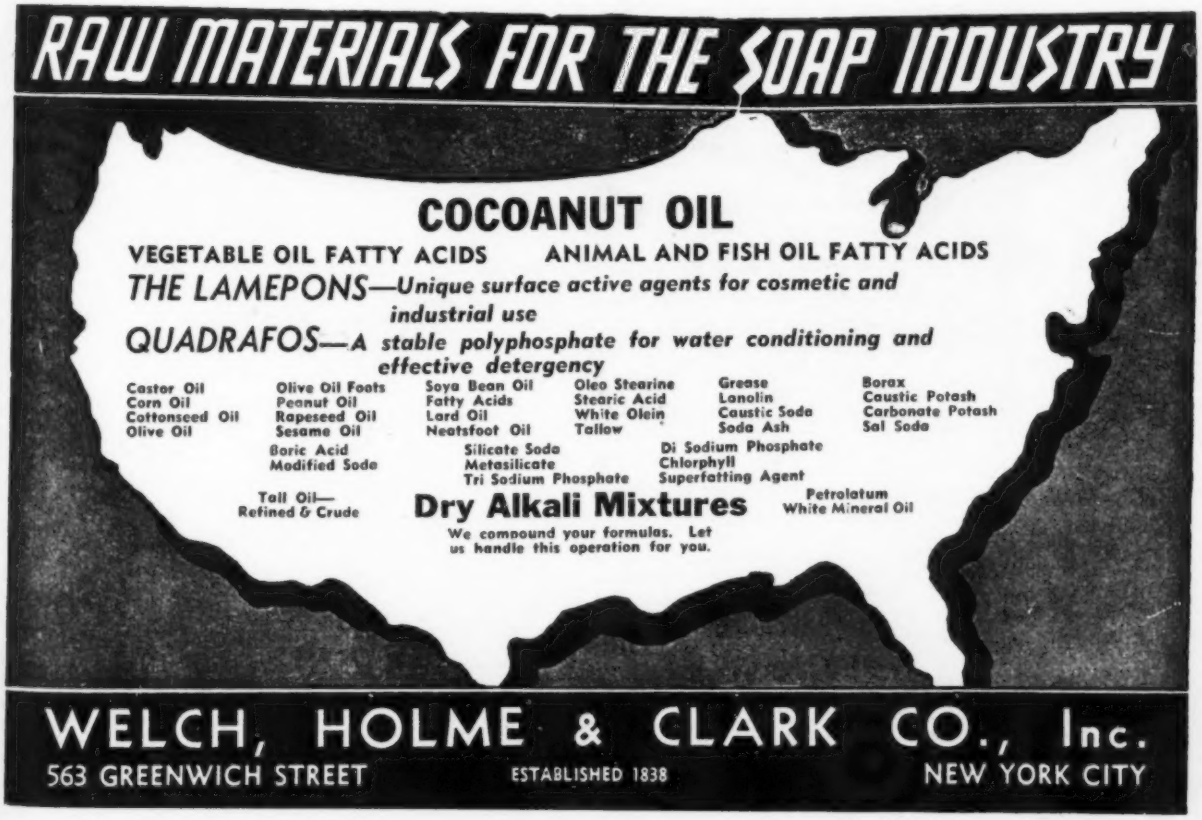
Another ceiling price was raised during the past month. This was on monohydrated copper sulfate, a basic ingredient in fungicides. The increase, effective Oct. 18, amounts to 25 cents per hundredweight on monohydrated copper sulfate produced in the East. Although applicable to sales in 200-pound drums in lots of 36,000 pounds or more at the wholesale level, the resulting increase in cost may also be passed on to consumers. Farmers may have to pay from five to six cents more per hundred pounds of finished material. The action was said to have followed a request by the War Food Administration to adjust prices for manufacturers, who have experienced increased costs, so that production of this basic agricultural chemical will be continued.

Writing 1945 Alkali Contracts

Solvay Sales Corp., New York, announced early this month that, effective immediately, contracts for 1945 deliveries of soda ash, caustic soda and chlorine were being written. No changes were reported to have been made in prices currently established. Prices for carloads, f.o.b. sellers' works include: soda ash, 58 per cent light—bulk 90c per cwt, paper bags $1.05, burlap bags $1.13; extra light—bulk 90c, burlap bags $1.15; dense ash—bulk 95c, burlap bags $1.15; caustic soda, 76 per cent, solid, drums $2.30, flake, drums $2.70, ground, drums $2.70, powdered, drums $2.70; 50 per cent liquid, sellers' tankcars, $1.95, buyers' tankcars $1.925; 23 per cent liquid, sellers' tankcars $2, buyers' tankcars $1.975.

Essential Oil Developments

Although substantial quantities of menthol are believed to have been arriving in the United States from Brazil, the dry weather that country has been experiencing and its effect on next year's menthol crop is causing the price to rise slightly. Another trade report that the government through the WFA is asking bids on 100,000 pounds of peppermint oil was published during the month. This is believed to be part of the amount the government will purchase during the year.



Here's ONE PURIFICATION PLANT IMPROVEMENT THAT SHOULD BE CONSIDERED IN YOUR *POST-WAR PLANS*

Yes, more and more Nuchar Active Carbon is being used to supplement overtaxed purification equipment. In normal times, the Oil and Soap Industries use many purification methods, but most of these involve the use of extensive equipment. Thus, soap manufacturers should investigate the possibilities of purification by adsorption, a process in which little or no additional equipment is necessary. The effectiveness, as well as the economy of using Nuchar Active Carbon as a purifying medium, has been fully demonstrated in the soap industry and other fields of industrial activity. It represents standard practice in many operating processes, such as: Chemicals, Drugs and Pharmaceuticals, Food Products, Industrial Water, Off-Grade Products, Oils, Fats, Waxes, Greases, Air Recovery Processes, Trade Wastes, Water Purification.

Let us show you how you can substitute the simple, low-cost Nuchar Active Carbon process for the more complicated purification methods which are being affected by material shortages.

Nuchar Active Carbons	*Abietic Acid*
Snow Top Precipitated Calcium	*Carbonate*
Liquid Caustic Soda	*Chlorine*
Lignin	*Liqro Crude Tall Oil*
Indusoil Distilled Tall Oil	*Tall Oil Pitch*
Sulphate Wood Turpentine	

NUCHAR

INDUSTRIAL CHEMICAL SALES

DIVISION WEST VIRGINIA PULP & PAPER COMPANY

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PRODUCTION SECTION

Soaps for Insecticide Use

IN making insecticidal emulsions, the usual emulsifying agents are soaps of fatty acids or rosin. Insecticides are often sold in the concentrated form, water being added immediately before use. Soaps that have a high miscibility in oils are favored as emulsifying agents. Potash soaps are in general more miscible than soda soaps, but the fatty acid portion of the molecule also has an effect, oleates being preferable to stearates, which are in turn preferable to palmitates. Sodium oleate is sufficiently miscible with nonaqueous liquids to be used. Fish-oil soaps appear to be satisfactory when potash is the alkali.

This is one application in which the quality of the soap is not important, and comparatively low-grade fats may be used, although even here the advantages of consistent and reproducible behavior make the use of sodium oleate worth while.

The main disadvantages of soaps as emulsifiers in these products are their precipitation by hard water, their low solubility in salty water, and their incompatibility with some toxic substances. Rosin soaps are sometimes used because they are more soluble in salt water than fatty acid soaps. Hard water reduces the proportion of active emulsifying agent, and may lead to inversion from oil-in-water to water-in-oil emulsions, because of the solubility in oil of the calcium and magnesium soaps.

Miscible Oils

Insecticides are often marketed in the form of what are termed "miscible oils," that is, preparations containing the toxic agent and the emulsifier. Such oils can be easily emulsified by simply stirring in water. In order that enough soap may be present to effect emulsification without separation or gelling, it is necessary to add an auxiliary solvent, or an aid to solution. Phenols are the most common auxiliary solvents. Fusel oil—mainly amyl alcohol—has been suggested as an alternative and possesses the advantage that it does not injure foliage. The amount of auxiliary solvent should be kept as low as possible, since it has no direct influence on the insecticidal properties, but the quantity will depend on the nature and proportion of the other components of the system.

In working out a formula it is recommended to study the system, emulsifier — auxiliary solvent — water, and use this information as the basis for further experiments with the toxic oil incorporated. A small quantity of water is a necessary component of a miscible oil, otherwise the system will not retain the amount of soap needed for subsequent emulsification. This is an important point that was long overlooked because it was not realized that the water content of curd soap played an essential part.

A miscible oil is therefore a single-phase, 4-component system which can be easily emulsified with water. The hydrogenated hydrocarbons, decalin and tetralin, are suitable toxic ingredients and have the advantage that a product made with them will have consistent chemical and physical properties, which may not always be true when coal-tar or petroleum fractions are used. This question of purity is not so important in the preparation of winter sprays, which will not encounter foliage. It is desirable to have the maximum amount of toxic oil, and 66 per cent is a reasonable proportion. This concentrated oil can be diluted with water to give a 15 per cent emulsion for use. A suggested formula is:

	Parts
Fish-oil soft soap	100
Phenol or fusel oil	50
Toxic oil	300

Emulsion Breakdown

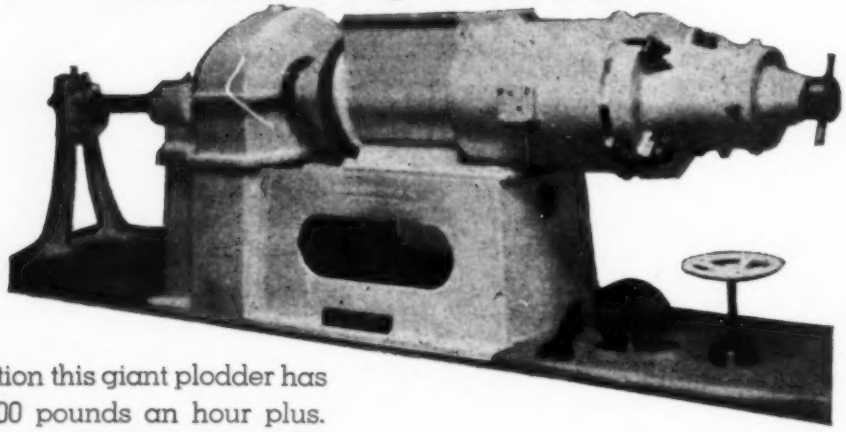
A breakdown of the emulsion would result in a high concentration of the toxic ingredient on the plant, with consequent injury to it. This possibility can be avoided only by controlling all the factors which affect the stability of the emulsion. These are the nature and quantity of emulsifier used, the mechanical efficiency of the emulsification process, and the relative density and the viscosity of the liquid phases. For example a higher per cent of fatty-acid soap would be required if the mixture was to be diluted with a hard natural water than with a soft water. It is an advantage to have the density of the oil as nearly as possible the same as that of the aqueous phase, if necessary by adding a dense substance such as cresol, which is soluble in the oil but not in the water. J. L. Boyle. *Manufacturing Chemist* 15, 279-80 (1944).

A higher fatty-acid glyceride is reacted with a saturated aliphatic monohydric alcohol having less than 5 carbon atoms, in the presence of a small amount of an alkali metal hydroxide under substantially anhydrous conditions. The hydroxide is added in an amount of 0.1-0.5 per cent by weight based on the glyceride. The amount of alcohol is not more than 1.75 equivalents of the glyceride. C. B. Bradshaw, to E. I. du Pont de Nemours Co. Canadian Patent No. 423,013.

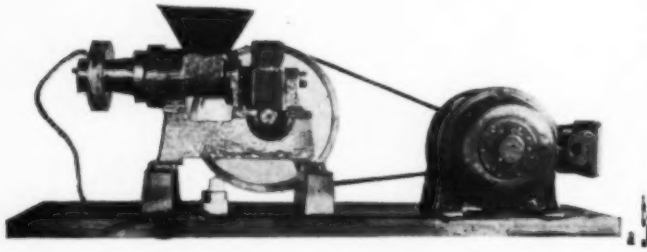
From the Smallest to the Largest...

HOUCHIN PLODDERS

are built for many years of efficient service, in every kind of soap manufacture.



For heavy production this giant plodder has a capacity of 3,000 pounds an hour plus. The screw diameter is 14 inches. Other sizes 4 inches to 12 inches screw diameter.



For making sample cakes of soap by soap, perfume and color manufacturers. This small plodder has a 2½ inch bronze screw, plated front head, screen and plate holder and an electric heater.

Electric heaters to heat front of plodder give more uniform heating than gas, steam or lamp, without blistering soap. Furnished with all plodders.

HOUCHIN

MACHINERY COMPANY, INC.

Manufacturers of soap making equipment

6th AND VAN WINKLE AVES. **HAWTHORNE, N. J.**

Brushless Shaving Creams

Brushless creams are more convenient and give more comfort in shaving than soap, as men are finding out. They require no brush, take up less room in a travel kit, are applied to the face more rapidly, soften the beard more quickly, and leave a slight film of oil on the face for protection against drying and chapping.

The equipment required to make these creams is quite simple, but difficult to obtain now. It consists of a steam-jacketed kettle of stainless steel, glass-lined steel, aluminum, or tinned copper, for melting the oil mixture. A lye tank is usually required of stainless steel or black iron. The agitating kettle is preferably of stainless steel, steam-jacketed, and equipped with a strong, slow-moving agitator.

Many ingredients are used, and at times many substitutes for these. The following is an example of a basic formula:

	Pounds
I. Stearic acid (triple pressed	240
Beeswax	80
Mineral oil	40

Melt together at about 160°F.

	Pounds
II. Triethanolamine	15
Water (distilled or softened)	1210
Borax	8
Sulfonated castor oil	4
Glycerine	48

The second group of ingredients are poured together into the mixing kettle and heated to 150°F. until all are dissolved. With the agitator in motion, the stearic acid mixture is poured into the solution in the mixer in a slow stream. Agitation is continued for several hours until the mass is perfectly smooth. A sample is withdrawn and examined for consistency and pH, which should be 6.6-6.8. Mineral acid may be added to reduce the pH if necessary, or more triethanolamine if the acidity is too great.

When the cream is of the proper consistency, turn the cold water into the jacket and agitate the mix over night. In the morning add about 5 pounds of perfume and mix until distributed. If the cream is too stiff after making the pH adjustment, add small quantities of hot water to give the proper consistency.

Aging is apt to cause changes in these creams, especially exposure to extreme heat and cold. Samples from each batch should, therefore, be stored under the most unfavorable conditions in the laboratory, and then checked after some weeks. The creams hold up more satisfactorily on the acid side.

A formula such as that given may be altered in many directions, as by using lanolin instead of beeswax, or another alkali in place of triethanolamine, or by including a wetting agent, or germicidal agent. The consistency may be modified so that formulation and selection of the proper proportions must be carried out with great care. Samples of new formulations require extended study.

The popularity of brushless shaving creams is still increasing, so that these products deserve close attention. E G. Thomssen. *Drug & Cosmetic Ind.* 55, 280-1, 360 (1944).

Refining Cottonseed Oil

A method is described for removing a suspension of positively charged colloidal particles such as those of coloring matter, from an oil. It involves converting the oil to an aerosol, as by a centrifugal atomizer, separately converting a refining agent such as a caustic soda solution to an aerosol, and intimately mixing the 2 aerosols. In this way the neutralizing agent reacts with the free fatty acids in the oil to form a highly dispersed colloidal soap. This is intimately mixed with the dispersion of oil so that the positive charges on the colloidal particles are neutralized by the negative charges on the colloidal soap and they are coalesced with the soap and the soap stock separated from the oil. R. H. Fash, to Anderson, Clayton & Co. U. S. Patent No. 2,342,042.

Acid Foam Baths

As foamers for acid foam baths the salts of ester-like condensation products of fatty acids, and amino or hydroxy alkyl sulfonic acids are used. The baths are made in the presence of coniferin oil. J. Pfanner, to Cirine-Werke Bohme & Lorenz. German Patent No. 739,335; through Chem. Abs.

Crystallization of Soap

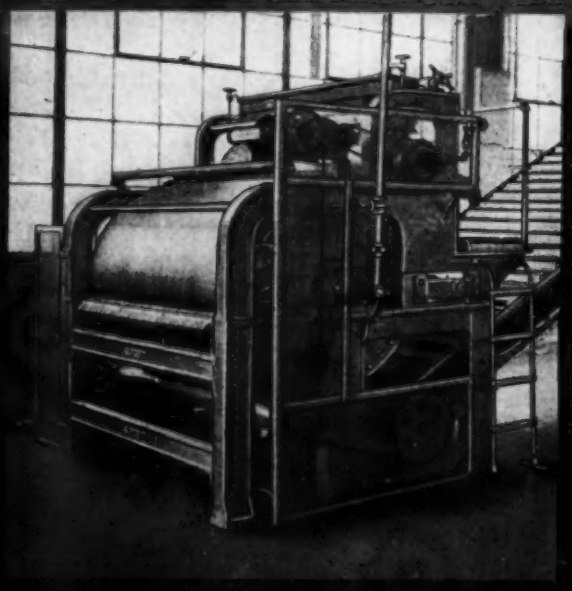
Although the short spacings of X-ray diffraction patterns have proved most suitable for identification of at least four crystalline modifications of sodium soap, it is necessary to turn to the long spacings in order to ascertain the crystallization behavior of the individual fatty constituents of mixed and commercial soaps. The present study, based on long-spacing data, indicates that fractionation into the constituent single soaps is completely absent when anhydrous binary systems crystallize from isotropic melt. Fractional crystallization may occur when there is a sufficient difference in chain length between the two components, but even here the fractions are solid solution phases and not pure components. It appears to be the general rule that commercial soap crystallizes as a solid solution. No evidence of fractional crystallization has been observed in commercial soap.

Short-spacing X-ray patterns are uniquely useful in detecting changes in crystal modification over wide ranges of fatty composition. Their value in the complicated mixtures involved in commercial soaps needs scarcely be emphasized. R. H. Ferguson and H. Nordsieck. *Ind. Eng. Chem.* 36, 748-52 (1944).

Foam Stability

The foam of soaps of pure fatty acids varies in stability with pH, with concentration, with temperature and with the presence of calcium and magnesium soaps. At 57° C., the foam of a 0.1 solution of sodium laurate shows maximum stability at about pH 7, of sodium myristate at about pH 8.5, and of sodium palmitate at about pH 10.5-11.5. Adjusted to pH values for maximum foam stability at 57° C., sodium laurate first reaches maximum foam stability at about 0.3 per cent, sodium myristate at about 0.15 per cent and sodium palmitate at about 0.1 per cent. Several curves showing the results are given. Good foam stability was obtained for a few solutions containing two materials, neither of which alone is a particularly good foam stabilizer. G. D. Miles and J. Ross. *J. Phys. Chem.* 48, 280-90 (1944).

Sargent's latest . . .
SOAP CHIP DRYER



YOU will be interested in seeing two views of a recent installation of the latest SARGENT Dryer and Chilling Roll as set up and operating.

• Our engineers have developed a Roll and Dryer that delivers just what the Trade demands . . . **extremely thin, smooth chips!**

• The drives are of the variable speed control type. Designed for compactness and accessibility. The unit requires only the minimum of steam and power.

• Write to SARGENT today for complete information on this new machine.

C. G. SARGENT'S SONS CORPORATION • GRANITEVILLE, MASSACHUSETTS

PRODUCTION *Clinic*

By DR. E. G. THOMSSEN, PH.D.

THE question of reconversion of industries is a live subject at this time. It is surprising to learn how little this word means to many persons. They do not seem to realize that the present shortages they complain of are due to many plants having been converted to war essentials. This applies not only to the heavy industries, but to other branches as well. The need for war materiel has brought about some strange transformations in industry. Thus we find feed companies building ships, soap companies making shells, can companies making torpedos and many similar conditions. War time conversions have been more widespread than most of us realize. In many cases reconversion will undoubtedly mean discontinuance and liquidation. A new problem, also, that will have to be contended with is the keen new competition that will result in the marketing of "new" products. Manufacturers as a general thing are keeping quiet along this line, but just as new household appliances will be made by airplane companies, or radio manufacturers will offer heating equipment operated by electronics, so will others now making war essentials, reconvert to articles and products in new fields for which they believe a market can be established. The soap and sanitary chemical industries, in this respect, are not immune.

In these industries which we serve, the reconversion problem will not be as complex as in many other industries. The present, big problem

has been to increase production with old equipment. Wear and tear on machinery, that in many cases has operated twenty-four hours per day and which is now of the obsolete type, has been terrific. The course of the war indicates this period is nearing the end. It is good strategy to piece out old equipment as long as possible. From the flow of information, largely thru temporary bulletins, that have come to us, we are sure that makers of machinery, equipment and packaging materials, used in our particular trades, have not forgotten the post war period. New catalogues, pamphlets and technical bulletins, describing new departures, are in preparation, we are told time and again. This presages important developments. We believe, then, it is smart to wait for them. In the period after hostilities cease competition will be keen and a buyers' market will again prevail. Labor costs may be the deciding factor of profit or loss. For that reason the economies of labor saving equipment must be given full consideration. Business in general, also will be aided by rearranging and purchasing in the post war period.

Drum Handling

The handling of steel drums has more or less been a headache in this present drum shortage. Drums that would ordinarily be discarded in normal times have been preserved, repaired and used over and over. The designation STC (Single Trip Container) is a misnomer in war times. Steel containers designed for single trips have been regular commuters. The problem of keeping these packages in usable condition has increased as they became more worn.

The Vol-U-Meter Company of Buffalo, N. Y. has aided in this emergency in many directions. They merchandise a full line of drum handling and reconditioning equipment. This includes inside and outside cleaners, dent removers, painters, elevators, upenders, faucets, hand agitators, extension lamps, tumblers and the Vol-U-Meter that quickly and accurately fills drums to a predetermined net weight when a cut off switch is attached to any beam scale. Drums of 5, 30 and 55 gallon capacities are featured. Their equipment eases much of the problem of drum handling.

This company also adapts the Vol-U-Meter to the filling of pastes and liquids through single and multiple heads. Smaller manufacturers having filling problems and who cannot invest in full automatic equipment may find the answer in the Vol-U-Meter catalogue.

Packaging Machinery

The Pneumatic Scale Company of North Quincy, Mass. has sent us a pamphlet which describes their line of packaging and bottling machinery, and gives a glimpse as well at future packaging. This literature illustrates machines that now can be supplied by the company on suitable priorities.

Through their research laboratory they are finding practical ways to

LAVENDER OIL ARTIFICIAL

SPANISH ROSEMARY

SPANISH SPIKE LAVENDER

ARTIFICIAL SASSAFRASS

For many years much of the research and development work of our laboratory has been devoted to the perfumery problems of the soap and sanitary chemicals industry. As a result we have been able to supply synthetic products successfully to relieve shortages caused by war conditions. Why not consult us regarding your problems? Samples upon request.

ESSENTIAL OILS and SYNTHETICS

BERGAMOT
CASSIA
CEDARWOOD
CEDARLEAF
CLOVES
GERANIUM
LAVENDER
THYME
WINTERGREEN
PETITGRAIN

BENZYL ACETATE
TERPINEOL
AMYL SALICYLATE
ANETHOLE
CINNAMIC ALDEHYDE
CITRONELLOL
EUGENOL
ISOEUGENOL
HELIOTROPINE
ISOBORNYL ACETATE
LINALYL ACETATE
IONONES
MUSKS
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STANDARD SYNTHETICS, INC.

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BRANCHES AT
CHICAGO SAN FRANCISCO KANSAS CITY, MO.

use the many types of better and more protective packaging materials that have come into existence in the past years. Their machines are already handling these in certain cases. With shipping space and packaging material extremely scarce, they have developed a system for compressing and packaging dehydrated foods directly into the container without breaking the particles. This principle, which undoubtedly can be applied to other products, means lower container costs.

Carton feeding, lining, closing, net weighing and sealing equipment, net weighing machines, compression fillers and weighers, bottle cleaning and liquid filling machines, automatic cappers, automatic labelers and bag fillers are some of the full automatic and semi-automatic equipment featured. Numerous nationally advertised products are packed entirely by Pneumatic Scale equipment.

Comminuting Machine

The W. J. Fitzpatrick Company, of Chicago, build a pulverizer which has unusual features. This piece of equipment which they call a comminuting machine has a wide range of uses. It is, furthermore, flexible and mobile. Flexibility is obtained thru two or more operating speeds and various sized screens for twelve different meshes from 6-200. Rubber tired casters with a locking device permit movement for use to various points in the plant. The machine is of sturdy construction and all parts that contact the product are built of stainless steel or other resistant types of metals.

This machine, in operation on either wet or dry materials, produces a uniform granulation without much fine powder from wet masses and rapidly granulates without dust when used for dry granulation. As a pulverizer up to 1,000 lbs. per hour of a 100 mesh powder may be obtained, depending upon the material. The grinding operation is completely dustless and requires no dust collector. Colors, oils and other liquid ingredients may be dispersed rapidly and uniformly throughout a dry fine powder. It is used for sizing barks, roots, etc. for percolation. Pastes may be milled with a saving of as much as 80 per cent in time. This machine was much discussed by production men when first introduced. It merits further investigation by those interested in the operations cited.

Edge Filtration

The Cuno Engineering Corporation of Meriden, Conn. manufacture the Cuno Filter which finds many applications in various industries. They publish a catalogue which explains the range of filters and augment this with a 32-page booklet named "Quick Facts" which outlines the adaptations of their filters to various industries, including soap-making.

The Cuno Filter produces a continuous flow by passing the liquid to be filtered between a series of wheel-shaped discs of metal, separated by spacers of desired thickness. The liquid is pumped into the sump or casing around this set-up and then passed edgewise thru the disc bank. As the solids are removed from the filtrate, which passes out and up thru the spokes or center of the discs, these solids gather on the edges of the metal strips. The usual difficulties of thoroughly removing these accumulations, and the labor involved in doing so, are readily solved in this filter. By fixing stationary cleaner blades and rotating the stack of discs and spacers by hand or by motor, as desired, these solids are combed clear of the filter surface, are pushed outward and compacted, and eventually fall into the sump below so as not to interfere with the incoming liquid. This operation is carried out without stopping the flow.

Much molten soap in various plants is passed from the kettle on its way to the dryer or frames thru these filters to remove foreign specks, particularly dark ones, that cause unsightliness in the finished cakes or chips. The device may also be used to remove specks from the fats and oils used in soap-making. These filters are just as useful in other directions and warrant investigation by those having a filtering problem.

Laboratory Aprons

Hydro-Tex Corporation of Chicago announces a new waterproof apron for workers in laboratories and plants. The material from which this apron is made is impregnated with "Hydro-Tex," a non-shrinking, non-sticking, non-cracking material that remains pliable and soft under severe conditions. The aprons are reinforced at all points of stress, so as to increase their life.

Role of Soap in Dermatitis

Writing in the Sept., 1944, issue of *Industrial Medicine*, Dr. William R. Redden, of Columbia University College of Pharmacy, New York, lecturer in physiology and co-director of the Spars' training detachment, points out that: ". . . many cases of industrial and non-industrial dermatitis can be prevented by keeping clean." As general preventive measures Dr. Redden recommended: 1.) "When rubber gloves, protective lotions, creams or ointments are used, make certain the skin is first washed with any good toilet soap and water; 2.) Either supply soap and towels, or provide a routine whereby each person has his own; 3.) The removal of industrial dirt is best accomplished by the use of any mild toilet soap—along with cornmeal instead of a brush. (This avoids the possibility of using a brush that is too stiff.) 4.) Avoid use of strong soaps and powders—harsh and abrasive cleaners. Never use grease solvents of any kind, such as gasoline, benzine, kerosene or turpentine.

Spotting of Soaps

Factors responsible for spotting and discoloration in soaps are mainly air, moisture and direct sunlight or strong light, metal catalysts such as copper, cobalt, lead, manganese and mercury but not nickel and tin, and perfumes such as methyl anthranilate, methyl methyl anthranilate, indole, skatole, heliotropin, aubepine, vanillin, ethyl vanillin, benzaldehyde, bromostyrene, citral, methyl salicylate, eugenol, isoeugenol, methyl isoeugenol, jasminyl acetate, benzyl acetate over jasmine, and jasmine products generally. Sadgopal. Soap, Perfumery, Cosmetics 17, 176-9 (1944).

Soapmaking in Wartime

The perfuming of soap has been complicated not only by shortages of the materials found in every perfume formula, but also by the stock of fats used as the base for toilet soaps. The increased use of lard and especially of grease has given the finished cake more of a fatty odor, which perfumes have had to cover up.

There has been a shift to aromatic chemicals in place of essential oils, and a shift also in the direction of the use of substitutes for many of the essential oils. These artificial oils have been remarkably close to the natural oils in many cases, particularly with bergamot, geranium and vetivert. It is possible that the end of the war may see a reluctance on the part of many soapmakers and their perfumers to revert to pre-war formulas. The artificial oils in many cases have proved their worth and it may well be that they are here to stay.

Reduction in the use in soap of oils high in lauric acid content has resulted in loss of quick lathering power. In the case of liquid soap this has been especially true. The color of soap has become somewhat darker and duller, although antioxidants and increased quantities of titanium oxides have greatly aided in keeping up color standards. An examination of many white soaps on the market today indicates that not only deterioration in coloring, but yellow spotting or complete discoloration of soap is on the increase. The necessity of introducing rosin into the soap base, as well as larger quantities of lowered titer and lower quality fats, has complicated the use of antioxidants. Soapers who have given this phase due attention have been well repaid.

Use of lower titer fats results in the production of soaps which wear away more rapidly and become soft and mushy in poorly drained soap dishes. On the other hand, the greater use of low titer fats in milled soap has in many cases eliminated the cracking so often evident in the higher titered soaps. However, in spite of all these observations, the soapmaking art has progressed rather than retrogressed during the war period. In the post-war period, the soap making industry should be better prepared to maintain its reputation as one of the most stable of industries. E. G. Thomssen. The Givaudanian, September, 1944.

◆

Non-ionized Wetting Agents

Such non-ionized compounds as the monoglycerides of fatty acids, in which only one hydroxyl group of the glycerol has been esterified, might be expected to have some surface-active properties, since they have a long hydrocarbon chain combined with two solubilizing groups in the form of hydroxyl. As a matter of fact, glyceryl mono-oleate serves as an emulsifying agent for water-in-oil emulsions, but is not sufficiently soluble for some purposes. A development of this is the production of polyglycerol esters where a multiplication of hydroxyl groups exists. The molecules of such polymers are probably very large, but they have useful surface-active properties. Because they are not ionized, they can be used under acid or alkaline conditions, as well as in hard water. K. Tomlinson. Manufacturing Chemist 15, 251 (1944).

◆

Salts and Surface Activity

It has previously been shown that the increased surface activity of paraffin-chain salts by the addition of electrolytes can be accounted for by the change in the potential energy of the surface film brought about by the increased concentration of ions of opposite charge in the aqueous solutions. A theory is now developed to explain the differences in the effect of various added ions on the surface activity of anionic detergents, taking account of the charge and size of the ions. R. G. Aickin and R. C. Palmer. Trans. Faraday Soc. 40, 116-20 (1944).

Making A Divisible Soap Bar

A BAR of soap which may be readily broken in two is provided with a cleavage plane formed by perforations which have been collapsed. These extend almost through the bar from front to back and are about midway of its length.

The perforations may be made at two or more points by means of thin steel blades mounted in a single straight row with their broad surfaces in alignment. After the knife blades have been inserted and withdrawn, the bar is pressed into final form by means of a soap die. Besides giving the soap bar its desired pattern, the pressing serves to close up the perforations so that they are practically invisible and will neither present objectionable cavities to collect dirt nor reduce the specific gravity of the bar.

Inspection of the bars after perforation is desirable in case a blade breaks and remains embedded in the soap. This may be done automatically by throwing a narrow pencil of light on the flat surface of each blade. An electric eye, mounted beyond the blade in a position to receive the light beam if the end of the blade should be broken off, actuates a relay to disconnect the electric motor driving the perforating device. The bar of soap which has just been perforated may then be removed and discarded without difficulty.

The blade widths and spacing are such that the finished bar is strong enough to be used without accidental breaking until it wears thin, and yet not so strong along the line of perforations that the bar may be readily broken in two. The blades are preferably about the thickness of a safety-razor blade.

A row of narrow steel blades or of needles may also be used. Broken fragments of these are detected with the aid of a mechanical device instead of a light beam. X-ray inspection may also be used as a protection against turning out finished bars containing metal fragments. The Procter & Gamble Co. British Patent No. 560,650; through *Perfumery & Essential Oil Record* 35, 144-6 (1944).

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U.S.I. CHEMICAL NEWS

November ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1944

Non-Critical Resin Proves Practical for Variety of Jobs

S&W Aroplaz 1306 Performs Like a Modified Alkyd Resin

Introduced in the early part of this year as an alternate for critically scarce phthalic alkyd resins, S&W Aroplaz 1306 is now reported to be in successful use in a wide range of interior industrial coatings. The new resin is also proving practical in numerous architectural and exterior applications. Manufactured by a new process developed by U.S.I., "1306" contains no critical materials and is available without priority.

Color and Gloss

Initially very pale, the staining properties of "1306" are so slight that white enamels can be made approaching the whiteness obtained with alkyds, and color retention is excellent. In gloss and gloss-retention it is superior, in both clear and pigmented films, to many alkyds. It is also high in water- and alkali-resistance, and in flexibility.

SPECIFICATIONS — AROPLAZ 1306

	65% SOLIDS in MS	75% SOLIDS in MS
Acid Value (Plastic)	10-15	10-15
Color (G-H 1933)	7-9	7-9
Viscosity (G-H)	T-V	Y-Z1
Weight/Gallon at 25 C	7.7	7.9 lbs.

Metal-on-Plastic Plating Uses Alcoholic Solutions

According to claims set forth in a newly-granted patent, a metallic coating heavy enough to serve as a cathode for subsequent electroplating may be applied to plastic articles, such as buttons, costume jewelry, and so forth.

The plastic object to be plated is prepared by rolling it in sand to abrade the surface, immersing it in a ferrous sulphate bath and then one of copper sulphate. Next, the plastic article is treated in a bath of ethanol, water, sulphuric acid, quinol and stannous sulphate. Following this, comes a treatment in a bath of sodium hydroxide, silver nitrate and ammonia.

In order to cause a thin layer of silver to deposit from the silver nitrate upon the plastic articles, a reducing agent is added to the last bath. This reducing agent is composed of ethanol, sugar, nitric acid and water.

The metallic silver thus deposited is heavy enough to carry the subsequent electroplating current.

U.S.I. Announces New Pacific Coast Office

In order better to serve western industry, U.S.I. has opened a new Pacific Coast office in Los Angeles. This new office is to be the headquarters for the company's entire Pacific Coast operations, and will handle all sales and technical matters in the states of California, Oregon, Washington, Idaho, Nevada, Utah and Arizona.

The new office is to be in the charge of Mr. Robert E. Alexander, Pacific Coast Manager, while Mr. G. C. Dohm will serve as Manager of the Los Angeles Division. Mr. Henry M. Lindau will specialize in resin sales and will have his headquarters in San Francisco.

Address of the new office is 433 South Spring Street, Los Angeles 13.

Need Ethyl Acetate?

The most widely used fast-evaporating nitrocellulose solvent, ethyl acetate offers the advantages of low cost, strong solvent power and mild, pleasant, non-residual odor. With the availability situation undergoing continual change, it is quite possible that you can make wider use of this versatile solvent. U.S.I. will be glad to discuss the possibilities of filling your requirements.

Tipsy Oysters Shed Shells in Record Time

Fish and Wildlife Service experiments point the way to more rapid shucking of oysters. In laboratory tests the oysters were soaked in carbonated water for five minutes.

The carbon dioxide intoxicated the bivalves to the point where the large muscle holding the shells closed relaxed and the oysters were easily opened. In one test, a novice opened 150 drunken oysters in twenty minutes, a speed difficult for the most experienced oyster shucker to attain with sober oysters. Neither flavor nor quality of the oysters was affected.

Doubles Output of Ethyl Acetoacetate, Wider Use Foreseen

U.S.I. Pictures Continuing Postwar Demand for Its Increased Production

The postwar use of synthetic anti-malarials now seems certain to continue at much higher levels than was originally thought. For Atebrin and other quinine substitutes are demonstrating definite therapeutic advantages over the natural product. Equally significant, they are bringing tremendous reductions in the cost of treating and preventing malaria. With the end of the war, these factors will make it possible to attack—on a scale never before dreamed possible — a scourge which still takes more than a million lives a year.

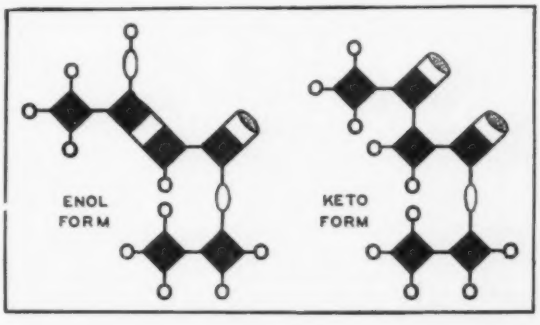
The use of the sodium derivative of acetoacetate in the preparation of Atebrin and other anti-malarials thus will continue alone to account for large quantities of this reactive intermediate. The synthesis of thiamin hydrochloride (Vitamin B_1) and antipyrine are other uses now consuming steadily increasing tonnages.

Other Uses Seen

However, it was not merely to meet the mounting demand for ethyl acetoacetate in these two fields that U.S.I. recently doubled its production. For the organic structure of ethyl acetoacetate is such that it permits a wide variety of chemical reactions leading to a long list of valuable end-products. With the experience gained in the last few years in carrying out these reactions on a commercial scale, many new end-products loom as imminent realities. The two unusual properties which make ethyl acetoacetate important in chemical synthesis are:

1. The reactivity of the hydrogen on the carbon adjacent to the $COOC_2H_5$ group. Hydrogen substitutions at this point lead to the introduction of groups such as halogen, metal, acyl and alkyl radials. Ammonia, aniline, urea and many other types of compounds containing the NH_2 group, add with the elimination of water.
2. The addition products (especially the amides) mentioned above have a tendency to close into ring structures of the most varied types, giving for example substituted pyrroles, pyrazoles, pyrazolones,

(Continued on next page)



The chemical structure of ethyl acetoacetate shifts between the enol and keto forms. Both forms are shown in this diagram, in which hydrogen atoms are represented by circles, oxygen by ellipses, and carbon by squares. The square is used as the symbol for carbon, instead of the conventional tetrahedron, in the interests of simplicity.

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November ★ **U.S.I. CHEMICAL NEWS** ★ 1944

Soybean Protein Extraction Stepped-up with Ethanol

The best soybean protein is that extracted from flaked soybeans, which contain less oil and a more soluble protein than does soybean expeller meal. To date, flakes available commercially have been those extracted by petroleum ether.

A study made by the U. S. Department of Agriculture laboratories demonstrates that flakes extracted by ethanol contain 10 per cent more protein than the petroleum extracted flakes, and in addition the final separation of the protein from the solution of flakes in water is greatly speeded. Protein precipitated from ethanol-produced flakes settled in 20 minutes, while it required two hours for protein from petroleum-produced flakes to settle. Filtration rate of wet protein is increased 50 per cent.

The pilot plant, operated by the laboratory for more than a year, should be a source of valuable information to plants engaged in the large-scale production of soybean protein.

New Glycine Process Hinges on Ethanol

Glycine, and the primary amino carboxylic acid which is used as an intermediate in the synthesis of surface-active agents and corrosion inhibitors, are prepared more readily by a new method, according to the claims set forth in a recent patent.

The glycine is produced by heating a solution of sodium hydroxide, sodium cyanide, an alkyl metal salt of aminomethanesulfonic acid, and water together, adding hydrochloric acid to the solution, and evaporating the solution to dryness. From this residue the glycine hydrochloride is extracted with ethanol.

Primary amino carboxylic acid is obtained by reacting a metallic salt and an alkyl metal salt of aminomethanesulfonic acid together with water in an aqueous solution which is then acidified. After multiple refluxings, excess mineral acid and water are removed by evaporation. The dry residue is dissolved in ethanol to remove the amino carboxylic acid salts from the inorganic salts. An addition of aniline to the alcohol extract liberates the amino-carboxylic acid from its salt, and as it is virtually insoluble in ethanol, it may be separated directly by filtration.

Ethyl Acetoacetate

(*Continued from preceding page*)

pyrimidines, pyridines, quinolines, isoxazoles, furane and coumarin derivatives.

Amino Acids

One example of a field in which ethyl acetoacetate appears destined to open up new possibilities is in the synthesis of the amino acids which have been shown to be essential to human life, and which are increasingly mentioned in projected nutritional programs. Starting with ethyl sodium acetoacetate, it is indicated that these amino acids can be prepared according to the following reaction:

Amino Acids Made with Ethyl Sodium Acetoacetate

$$CH_3C(ONa):CHCOOC_2H_5 \xrightarrow{RCl} CH_3COCHRCOOC_2H_5$$

$$CH_3COCHRCOOC_2H_5 \xrightarrow{C_2H_5ONO + H_2SO_4} RC(:NOH)COOH$$

$$RC(:NOH)COOH \xrightarrow{H_2} RC(NH_2)HCOOH$$

Cottonseed Suggested as New Source of Lecithin

Soybean phospholipid, commercial source of lecithin which is an antioxidant and emulsifying agent widely used in foods and pharmaceuticals, finds a close counterpart in cottonseed phospholipid, according to recent investigations. Possibilities of using the cottonseed product as an added source of lecithin suggest themselves.

The cottonseed phospholipid was prepared experimentally by stirring commercial cottonseed, containing phospholipid, with changes of acetone to percipitate the phospholipids. The resulting powdered phospholipids were dissolved in ethyl ether and then poured into an excess of acetone. The resulting purified phospholipid was a stable, powdery solid, brilliant yellow in color, and the yield was 54 per cent. Fifteen to 20 per cent of this phospholipid could be dissolved by extracting with multiple changes of hot ethanol. This resulting lecithin fraction was high enough in phosphorous and nitrogen to render it commercially usable.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

A new wetting agent and detergent has been developed for use in the textile field. Added uses as an industrial cleaner and in priming compounds and pickling baths are claimed. According to the manufacturer, the product is highly concentrated, containing less than 5 per cent water, and is soluble in alcohol. (No. 869)

U S I

To strip paint from metal surfaces, a new compound is designed to be brushed on, then washed off with a hose, carrying the paint with it. It is said to remove zinc chromate as well as other paint coatings and to permit the washing of brushes and other equipment in water. (No. 870)

U S I

A new synthetic rubber cement, which is claimed to bond neoprene to neoprene or neoprene to fabric, and fabric to fabric, is announced. Company also announces a general-purpose cement claimed to adhere as well as rubber cement to a variety of surfaces. (No. 871)

U S I

Fungus resistance for phenolics is claimed to be imparted by a newly-developed coating compound. It is intended to inhibit fungus development on phenolic electrical parts used in tropical climates. The new product may be applied by spray, dip or brush and has high dielectric strength. (No. 872)

U S I

An improved phosphorescent pigment, which is claimed to emit a brighter afterglow of longer duration, has just been announced for use in luminous paints, tapes, decalcomanias, etc. (No. 873)

U S I

To measure water hardness, a new instrument has been developed. Said to be much more rapid than gravimetric procedures, this new apparatus is designed to give accurate measurement of minerals, calcium, and magnesium in water samples in ten minutes. The new instrument is described as small, sturdy and inexpensive. (No. 874)

U S I

Plastic insulating tape, claimed by its manufacturer to be resistant to caustic or corrosive fumes, oils, acids, alkali and moisture, has been placed on the market. Designed to protect wires, piping and equipment, it is stated to be remarkably flexible, of high mechanical strength and to have heat sealing and flame resistant properties. (No. 875)

U S I

A new, heavy-duty paint, which is stated to protect brick, concrete, metal and wood surfaces against severe attacks by moisture, salt water, acid fumes and alkalis, is offered. This black, processed coal-tar paint may be applied by either brush or spray and is said to be well adapted for use on ships, docks, etc. (No. 876)

U S I

Ceramic insulation may be deposited on copper wire and other electrical conductors by a newly developed process, according to a recent announcement. Films are stated to retain their electrical characteristics, at about twice the temperature limits of enamel and other organic insulations, and to be flexible enough for winding coils. (No. 877)

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Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
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PRODUCTS AND PROCESSES

Soap in Bar Form

Soap containing a substantial amount of the beta phase is agitated during chilling, and extruded in continuous bar form. The temperature is such as to keep the soap in a pasty condition during agitation and extrusion, so that the beta phase, as shown by x-ray photographs, is present in a substantial amount. This materially increases the sudsing rate of the soap. V. Mills. The Procter & Gamble Co. Canadian Patent No. 422,788.

Hard-water Detergent

Methods are described for the production of sudsing and detergent agents for use in hard water of the general formula $RCOOR'SO_3M$, in which RCO is the acyl radical of a fatty acid having 8-22 carbon atoms, R' represents an alkylene or hydroxy alkylene radical having 2-4 carbon atoms, and M is a metal forming a water-soluble salt. N. B. Tucker, to The Procter & Gamble Co. U. S. Patent No. 2,342,562 and 2,342,563.

Wool-grease Soap

For the purpose of facilitating the efficient extraction of unsaponifiable matter from dry-saponified wool-grease soap, the soap in its molten state, at about 500° F. is spread in a thin sheet and rapidly cooled so that it is rendered tough and plastic at about 200° F. The product so formed is then milled. H. W. Smith and S. G. Campbell. British Patent No. 553,322.

Dye-Soap Mixture for Burns

A potentially important use for soap in medicine comes in a report of a new preparation for treating burns. In England a triple-dye-soap mixture for burns has been used successfully. Most of the injuries so treated were second-degree burns. The mixture used contained a potassium oleate soap and 1 per cent of gentian violet, 1 of brilliant green and 1 of acriflavine. It is reported that among those treated with this preparation there were no cases of deaths, necessary skin grafts or complications. Bull. Assoc. Am. Soap & Glycerine Producers, Sept., 1944.

Polyphosphate in Soap

A sodium soap of a fatty acid normally precipitated by calcium salts, such as a laundry soap, is used together with 1-15 per cent of sodium tripolyphosphate as an inhibitor of such precipitation, and with a suitable proportion of water to form a bar which is stable against frosting. F. Bornemann and H. Huber, vested in the Alien Property Custodian. U. S. Patent No. 2,342,786.

Greases Containing Soap

Lithium and aluminum stearate greases can be made continuously by using heating, cooling, gelling and working stages in series. Votators can be used for heating, cooling and working. The entire process from slurry to finished grease takes about 20 minutes, most of which is in the gelling section. The source and refinery treatment of the oil and the type of soap affect the process appreciably. H. G. Houlton, B. D. Miller, P. A. Lenton, J. A. Taylor and B. E. Adams. Oil & Soap *21*, 258-53 (1944).

Sodium Silicate Detergent

To granulated alkali-silica compounded detergent is added 0.1-20.0 per cent of a non-saponifiable oil such as kerosene, light mineral oil, pine oil, oil of citronella, sassafras, clove, thyme, or a mixture of two or more of these. Such treatment prevents dust formation of the injurious compound. P. W. Soderberg, to Wyandotte Chemicals Corp. U. S. Patent No. 2,345,776.

Industrial Soft Soaps

In the manufacture of industrial soft soaps, soaps of low viscosity are obtained by the use of Mersol sulfonic acid. In order that the soap shall not be too soft, a mixture of fatty acids must be used such as whale-oil fatty acids, soap-oil fatty acids, preferably the hard fatty acids of train oil, and in certain cases the hard fatty acids of Japanese train oil. Liquid fatty acids used include those from soybean fat, peanut and corn oil. The ratio of liquid to solid fatty acids should be 1:1. Mersol sulfonic acid is then added to this mixture. Widaly. Seifensieder-Ztg. 69, 176-7; through Chem. Abs.

Soap Particles and Flakes

A soap produced in particle form suitable for household and laundry use contains a substantial proportion of sodium soap in the beta phase. It has a structure typical of a soap which has been whipped mechanically while at a temperature such that the mass is pasty. This temperature is maintained during the whipping until the soap is subdivided in particle form at pressures sufficiently low to avoid compacting the soap. The loosely knit structure of the soap particles permits ready penetration and disintegration by water. The soap may also be formed into ribbons so as to give flakes as the final form. V. Mills, to The Procter & Gamble Co. Canadian Patents No. 422,789 and 422,790.

Lower Alkyl Sulfates

In diffusion studies of the lower alkyl sulfonic acids, C_2-C_9, it was found that these do not show the characteristic minima of colloidal electrolytes, but resemble half-strong electrolytes. M. E. Laing McBain. J. Phys. Chem. 48, 237-41 (1944).

Spent Soap Lye Purification

A method is described in detail, with diagrams of equipment, for purifying spent soap lye. The method has the advantages of placing the control of the product in the laboratory, consistently yielding a glycerine feed liquor of the highest possible quality, conserving equipment, labor and treatment materials, and using facilities which are either present in or can be readily obtained by the soap plant. Wm. J. Govan, Jr. Oil & Soap *21*, 271-5 (1944).

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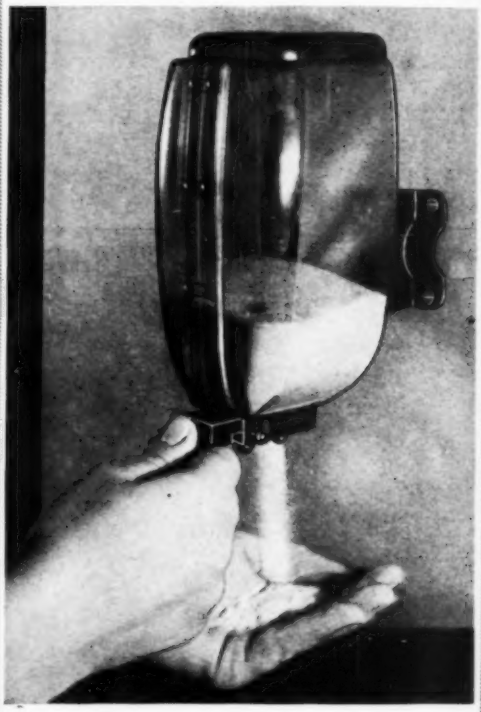

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Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine & Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 2,358,073, Insecticide and Process of Preparing It, patented September 12, 1944 by Frank H. Kellner and Richard R. Williams, Houston, Texas. The process of making a stable rotenone insecticide which consists in forming a clear potash soap and adding thereto an aqueous solution of potassium pyrophosphate to form a jelly, then mixing rotenone with the resultant.

No. 2,358,392, Method of Purifying Pyrethrum Extract, patented September 19, 1944 by Lyle D. Goodhue, Berwyn, Md., and Herbert L. J. Haller, Washington, D. C., assignors to Claude R. Wickard, as Secretary of Agriculture of the United States of America, and his successors in office. A process for producing a mixture of purified pyrethrum extract and sesamin compounds comprising the molecular distillation of non-pure pyrethrum extract with sesame oil, whereby the oil acts as an anti-foaming agent, and collecting the distillate fraction containing a mixture of the purified pyrethrum extract and sesamin.

No. 2,358,942, Insecticide, patented September 26, 1944 by Edouard H. Siegler, Takoma Park, Md., dedicated to the free use of the People in the Territory of the United States. An insecticidal composition comprising 2,2-bis (parachlorophenyl) 1,1,1-trichloroethane and lead arsenate.

No. 2,358,976, Bar Soap, patented September 26, 1944 by Harold G. Houlton, Wyoming, Ohio, assignor to The Procter & Gamble Co., Cincinnati. A low glycerine content bar soap, suitable for toilet and general household use, characterized by its property of dispersing the insoluble alkaline earth salts of fatty acids which form when said soap is used in hard water, comprising potassium and sodium salts of soap making fatty acids, no more than about 20 per cent of said fatty acids being fatty acids of tropical nut oils selected from the group consisting of coconut oil, palm kernel oil, babassu oil, and said tropical nut oils, in the fat formula, plus the percentage of the total soap fatty acids which are combined as potassium soaps in the product being at least 50.

No. 2,358,986, Insecticide and Germicide, patented September 26, 1944 by Edward R. McGovran, Hyattsville, and Lyle D. Goodhue, Berwyn Heights, Md., assignors to Claude R. Wickard, as Secretary of Agriculture of the United States of America, and his successors in office. A composition containing a relatively nonvolatile insecticide and olive oil for modifying the size of aerosol particles of the insecticide and to give them added insect-penetrating properties, said insecticide and olive oil being dissolved in a compressed liquid-dispersing agent which is gaseous under conditions of normal pressure and temperature, the proportions of ingredients being such that, when the composition is sprayed in the air, the dispersing agent quickly evaporates, leaving the insecticide suspended in aerosol form.

No. 2,359,240, Germicidal Compositions, patented September 26, 1944 by Alexander M. Partansky, Midland, Mich., assignor to The Dow Chemical Co., Midland, Mich. A germicidal composition comprising as an active toxic ingredient a mixture of from 2 to 75 per cent by weight of a water-soluble phenolate with an alkali metal pyrophosphate, and substantially free of alkaline reacting salts which reduce the germicidal effectiveness of the water-soluble phenolate.

No. 2,359,241, Liquid Germicidal Compositions, patented September 26, 1944 by Alexander M. Partansky, Midland, Mich., assignor to The Dow Chemical Co., Midland, Mich. A water-miscible liquid germicidal concentrate including orthophenylphenol dispersed therein as the principal toxic ingredient and from 0.25 to 4 parts of a material selected from the class consisting of pine oil and alpha-terpineol per part by weight of orthophenylphenol.

No. 2,359,266, Dichloromalononitrile as an Insecticide, patented September 26, 1944 by Ingenuin Hechenbleikner, Stamford, Conn., assignor to American Cyanamid Co., New York. A method of combating insects which includes applying thereto a toxic quantity of dichloromalononitrile.

Detergency Studies

The detergent efficiency of secondary sodium alkyl sulfates in removing olive oil from wool was studied with respect to the effects of added electrolytes, pH, and temperature. The efficiency of the detergent was at first reduced by the addition of electrolytes, but later was greatly increased at higher concentrations of the electrolytes. This initial decrease in detergent efficiency is not predictable from interfacial tension measurements.

The explanation of this original decrease is that the detergent is adsorbed from solution by the wool and such adsorption is increased in the presence of electrolyte. Removal of detergent from solution lowers cleaning efficiency because of the smaller concentration of detergent. As the concentration of electrolyte is increased, this increases the efficiency of the detergent present by lowering its critical concentration, that is, the same concentration of detergent becomes more effective. Electrolyte effect is largely due to ions of sign opposite to that of the long-chain ions, and divalent ions are more effective than univalent.

The efficiency of the detergent is greater at pH 8 than at pH 3.8. An increase in temperature to the point where the detergent becomes much more soluble decreases detergent efficiency. Scouring with secondary alkyl sulfates should be carried out at as low a temperature as possible, provided this is above the melting point of any grease to be removed. Another factor to be taken into account is the stability of the dispersion of removed oil in the detergent solution. R. G. Aickin. J. Soc. Dyers & Colourists *60*, 170-6 (1944).

Tin Determination

A turbidimetric method is described for determining tin salts in soap, which have been added to inhibit development of rancidity. G. M. Compeau and E. W. Blank. Oil & Soap *21*, 275-6 (1944).

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WAR shortages are bringing about many changes in our line of soaps for jobbers and converters. Fortunately, our many years of experience in the manufacture of quality soaps enable us to make these changes with the minimum inconvenience to our customers. Every possible effort is being made to maintain the quality of KRANICH soaps.

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Emulsifier for Degreasing

An emulsifying degreaser, characterized by the fact that it gains in strength with dilution, has been announced by Gaybex Corp., Nutley, N. J., as "9-Bex 45-A." The product has a fresh, clean odor, and despite its detergent action, it is stated it will not corrode metals nor harm the skin. Its pH is 7, its flash point 150° F. The material can be applied with a brush or a spray gun for cleaning, degreasing, and dewaxing machinery, motors, equipment and floors. It may also be used in standard emulsion degreasing tanks either cold or heated. A trace of the residual compound minimizes rusting after the washing process.

—— • ——

Dilatometric Curves

The dilatometric curves of volume change of a number of fats against temperature, were in every case composed of a series of straight lines, separated by sharp breaks or transition points. The number of linear sections in these curves corresponded in a general way with the known degree of complexity in the glycerides of the fats, and varied from two for a simple stearic-oleic glycerine mixture, to at least seven for an all-hydrogenated shortening. Since each break in the curve must correspond to the disappearance of a distinct class of solid glycerides or glyceride complexes, the application of dilatometry to the determination of glyceride composition in fats is suggested. E. A. Kraemer and A. E. Bailey. Oil & Soap *21*, 254-6 (1944) .

—— • ——

Fatty Acid Titration

Titration of fatty acids with the aid of a mixed indicator has the advantage of a sharper color change than that obtained with phenolphthalein. The mixed indicator consists of 1 part of a 0.1 per cent aqueous solution of cresol red neutralized with sodium hydroxide, and 3 parts of 0.1 per cent thymol blue solution neutralized with sodium hydroxide. The color of the indicator changes from pink at pH 8.2 through gray to purple at pH 8.4.

The following procedure was adopted. Dissolve the fatty acids in boiling ethyl alcohol and titrate with alcoholic sodium hydroxide solution, air free from carbon dioxide being passed through the solution during the titration. Make the usual blank titration of the reagents. A. Kleinzeller and A. R. Trim. Analyst 69, 241 (1944).

—— • ——

Alkyl Sulfate Detergent

One of the first examples of a synthetic detergent of the alkyl sulfate type to be manufactured on a large scale in Britain from petroleum by-products is the product "Teepol." Its large-scale production has been an important contribution to the national economy in fats. The manufacture of "Teepol" involves cracking of the base material to produce a mixture of long-chain olefines. This is fractionated and a selected cut corresponding to the C_{10}-C_{15} range is sulfated and neutralized under carefully controlled conditions, followed by special extraction and purification methods whereby a product of high purity and efficiency is obtained. Chemically the product is

CRESYLIC ACID — FORMALDEHYDE

AROMATICS

Phenyl Ethyl Alcohol
Methyl Acetophenone
Acetophenone
Geranyl Acetate
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Not until Valencia — the standard of American Pumice — was discovered at Grants, New Mexico, was it thought that a domestic pumice could match the quality of imported Italian Pumice. This inexhaustible deposit at Grants is true pumice stone and not a volcanic ash. It is physically and chemically equal in every respect to the now unobtainable Italian Pumice. • The Valencia plant's output of grades for every need is rigidly under control for particle size, purity, weight and color.

Check this table comparing Valencia with the highest grade of imported Italian Pumice. See for yourself that Valencia is truly the standard of American Pumice.

	American Pulverized Per Cent	Italian Select Per Cent
Silica	72.90	73.24
Alumina	11.28	10.61
Iron Oxide	.86	1.57
Titanium Oxide	.06	.10
Calcium Oxide	.80	1.10
Magnesium Oxide	.36	.40
Soda	3.64	3.03
Potash	4.38	5.58
Sulphuric Anhydride	.03	.05
Loss on ignition	5.20	4.04

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a mixture of the sodium salts of the higher secondary alkyl sulfates. It is unaffected by hard water and saline solutions and is stable over a wide pH range. For many purposes in the laundry and textile industries it can replace soap completely, in other cases partial replacement of soap results in increased efficiency, Chemistry & Industry, Sept. 9, 1944.

Dilatometric Measurements

In making dilatometric studies of a fat, the liquid sample is first cooled until it is wholly or partially in the solid form. Its temperature is then increased stepwise in small increments, and its volume is measured at each step until the sample is completely melted. The expansion of the sample, in terms of the original volume, is plotted against temperature. The resulting curve represents the phase changes occurring over the melting range, in terms of the dilations or contractions associated with these changes. The dilation of the sample due to simple thermal expansion of the liquid and solid phases is, of course, superimposed upon the volume changes due to phase transformations.

The method and apparatus are described for application to this type of measurement. A. E. Bailey and E. A. Kraemer. Oil & Soap *21*, 251-3 (1944).

Seal Oil Composition

Blubber oil from the seal family (Phocidae) has been analyzed for component fatty acids, and has been shown to resemble whale oil in the range of acids, the content and nature of the C_{18} unsaturated acids, and the degree of unsaturation of the C_{20-24} acids. F. Burke and H. Jasperson. *J. Soc. Chem. Ind.* 63, 245-7 (1944).

Gray Stains on Rayon

To remove grayish stains which may be the result of corrosion mark-off from the dry-cleaning wheel, immerse the garment in a solution of wet-cleaning soap containing about 5 per cent of ethyl ether and agitate by hand. Follow this process by the usual perborate bleach. *Laundry and Dry Cleaning J. of Canada*, Sept. 1944.

ESSENTIAL OIL OUTLOOK

(*Continued from Page 41*)

several citrus fruits growing in that country.

We have never looked to America as a supplier of essential oils, even for the period of the wartime emergency. We have pointed out that it would require time of experimentation, that the necessary machinery and manpower were unavailable, and that labor costs would skyrocket prices even beyond what an inflationary market could absorb.

This country has made its contribution, nonetheless. Its aromatic chemicals have maintained their high standards and their pre-war price levels. And in the field of natural raw materials, we have seen the development of many useful new products

In summarizing, the end of 1944 shows us that we have turned the corner. We are not at the end of the period of scarcities, but the end is in sight. That the industry has survived these lean years is indeed a tribute to its ingenuity. ★ ★

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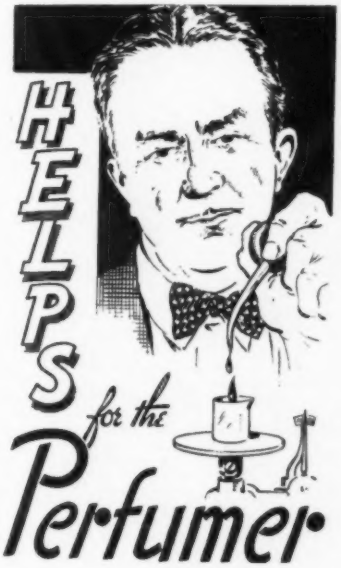

Recommended for use in soap and allied products Dreyer Imitation Oils are real helps to the soap perfumer. We have other grades and types of Imitation Oils to help perfumers of other products also.

Surface-active Agents

In forming a surface-active agent, it is not necessary that there shall be only one hydrophobic or water-repelling group, and only one hydrophilic or water-attracting group. There may be more than one of either type. A proper balance, however, is necessary, so that neither tendency completely dominates.

The properties of a surface-active agent are to some extent determined by the location of the hydrophilic group in the molecule. Generally speaking, detergents have a hydrophilic group at one end of the molecule, with the hydrophobic group strung out as a long chain to the other end of the molecule. Examples of such detergents include soaps, fatty alcohol sulfates, alkylol amine-fatty acid condensates, and alkyl aryl sulfonates. Materials which are good detergents usually foam well.

For high wetting-out ability, there is a great deal of evidence to support the view that the hydrophilic group should be located somewhere in the middle of the molecule. Typical examples are the secondary alcohol sulfates, alkylated naphthalene sulfonates and sulfosuccinic acid esters. These have little detergent action and much less tendency toward foaming.

While with wetting agents, water solubility is a prerequisite, with emulsifiers this may or may not be the case. Some of the most effective emulsifiers form emulsions in water but are not themselves completely soluble in water. In other words, the hydrophilic properties of a wetting agent should be greater than with emulsifiers. This is borne out by the fact that many good emulsifiers have little wetting action as determined by the usual methods. J. T. Eaton. *Rayon Textile Mo.* 25, 393-4 (1944).

Sulfonyl Chloride Compounds

Saturated alicylic or aliphatic monocarboxylic acids of 3-11 carbon atoms such as hexahydrobenzoic or decahydro-*beta*-naphthoic acids, are made to react in a liquid phase with SO_2 and chlorine in a ratio of 1.1:1.5 to 1 molecule of acid. The temperature may vary from 0 to 80° C. and the pressure 0.5-10 atmospheres or more. The reaction zone is irradiated with actinic light of a wave length 1800-7000 A. The reaction product may be hydrolyzed and neutralized to give a surface-active agent. A. L. Fox to E. I. du Pont de Nemours & Co. U. S. Patent No. 2,346,569.

Sulfonated Castor Oil

Turkey-red oil is sold as soda-finished or ammonia-finished in various concentrations, a common concentration being 50 per cent. This is often thought by the consumer to contain 50 per cent of fatty matter, when in fact it contains 45 per cent of fat by weight. Below is a list of commercial grades and their approximate fat content:

Turkey red oil	*Fat Content*
%	%
50	45
45	40.5
40	36
35	31.5
30	27
25	22.5

Concentrated Turkey-red oil is found on analysis of the products made by various manufacturers to have a fat content of 66-75 per cent.

Although sulfonated castor oil has the advantage of being more stable to hard water than soap, its scouring and emulsifying properties are not very significant. However, its special properties still make it useful for many industrial applications. S. Glicher. *Manufacturing Chemist* 15, 276-8 (1944).

Leather Treated With Soap

By impregnating leather with colloidal graphite, a product of surprisingly changed characteristics is obtained. The leather takes on a gray luster, becomes resistant to heat, exposure and moisture, and shows good electrical conductivity. The graphite in this valuable material acts as a lubricant, so that the product finds use in leather packings. In order that the tiny carbon particles penetrate the leather and spread evenly throughout the pores, they are dispersed in an olive oil soap solution that is suitable for spraying, painting, or dipping. Bull. Assoc. Am. Soap & Glycerine Producers, Sept., 1944.

Conductivity Studies

The relation of equivalent conductivity and equivalent concentration was determined for aqueous 0.002-1.0 Normal solutions of sodium salts of caproic acid, lauric acid, myristic, palmitic and oleic. Sodium oleate fails to show a critical concentration in the conductivity curve, which is probably connected with its unsaturation. At the critical concentrations of the other soaps, the curves fall sharply. Below the critical concentration the course of the curves deviates increasingly from the curves for electrolytes as the length of chain of the acid radical increases. At extreme dilution the curve again breaks sharply. P. Ekwall. Kolloid-Z. 101, 135-49.

Soap-boiling Equilibria

Since 1919 McBain and collaborators have been reporting investigations of phase diagrams of single pure salts of the fatty acids. These have shown the strict applicability of the phase rule, first suggested by Merklen in 1906, and the occurrence of true heterogeneous equilibria in all of these systems, including even commercial soap mixtures.

They have established the range of existence of the four chief recognized phases in soap boiling. Ternary systems have been described in terms of (1) curd fibers, (2) neat soap phase (liquid crystalline soap solution), (3) a similar but separate middle soap, and (4) isotropic solutions with complicated boundaries extending into lye or brine containing almost no soap.

It is now proved by a variety of methods, including direct analyses, that a new waxlike form, termed "kettle wax phase," exists in a predominant position in the ternary diagram at soap boiling temperatures even with the highest pure soap, sodium stearate. Only with the highest concentrations of salt are curd fibers of sodium stearate formed at 90° C. Therefore a general description of ternary systems involves soap, water, and electrolyte. J. W. McBain, K. Gardner, and R. D. Vold. Ind. Eng. Chem. 36, 808-10 (1944).

SANITARY PRODUCTS SECTION

Insecticides • Disinfectants • Moth Products
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Insect freedom for the millions...*profits for you*

Yes, NH Dust, a nitrated hydrocarbon derivative, can be had in unlimited quantities! It is not only a thoroughly effective formula for exterminating crawling insects—it's also a magic formula for expanding your earnings, because NH Dust means big profits for you. Here are ten good reasons why you should investigate this powerful killing agent:

1. Has quick action and "drive out".
2. Kills insect eggs in addition to acting like a Pyrethrum-Sodium-Fluoride combination.
3. Gives high kill and long residual action.
4. Costs less than pyrethrum powder.
5. Eliminates the hazard of using highly poisonous powders.
6. Ideal for packagers of "Roach Powders" or for service work against roaches, bed bugs, ants, silverfish.
7. Offered to you only after our customary careful laboratory and field studies, including months of practical trial by numerous Pest Control Operators.
8. Easy to use, easy to package.
9. Backed by John Powell & Company, traditional makers of insecticides with sure-fire killing power.
10. Your sample is earmarked and waiting for you.

[Pyriscents—If you have a perfuming problem, especially for "difficult to cover" ingredients, investigate these specially compounded insecticide perfumes that will not reduce the toxicity of the spray. Pyriscents are available in many odors, and being completely oil soluble they are 100% efficient and economical.]

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By Jupiter, Jennifer my girl,
But could you be employing Madame's "Bewitching"?

Not quite, Jasper, my man. It's that new Perfume Oil Fruit Berry MM&R that gives this spray the refreshing fragrance of ready-for-picking fruit berries.

(Aside to students of chemistry) The most remarkable feature of this extraordinary fly-spray deodorant-perfume oil is that so delicate a perfume not only neutralizes the odors of toxic agents but actually provides the finished product with a refreshing fruity fragrance, even when used in such economical proportions as 1½ to 2 ounces to 20 gallons of spray. — *Write today for free testing sample.*

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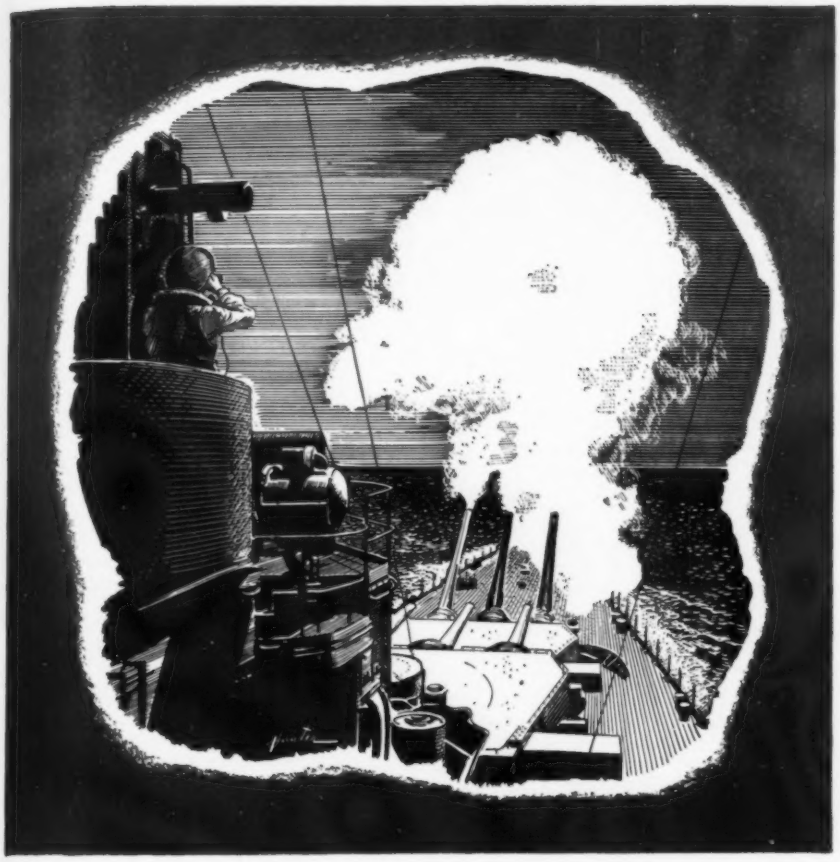

When Accuracy is a Must

On the horizon's rim, the enemy maneuvers desperately to elude the conflict. The first salvos must find their marks to assure decisive action.

The range finder brings twin images into sharp coincidence . . . the range is worked into a formula with speed and course, barometric pressure, air temperature and humidity, wind deflection, powder temperature. Within seconds the turrets swing and the huge guns roar . . . the spotter checks the pattern of a perfect salvo, amazing in its accuracy, which initiates another great naval victory.

Accuracy in the manufacture of many products is today accepted almost casually. But intense and constant effort is required to maintain these high standards. Columbia, recognizing the problems of its customers, helps to make their task easier by furnishing chemicals which meet exacting specifications.

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CLEVELAND · PHILADELPHIA · MINNEAPOLIS · CHARLOTTE

COLUMBIA SPOTLIGHT

RIVER TRANSPORTATION of Chlorine has received strong impetus as the result of a new barge designed and perfected by Columbia. Cradling four huge tanks in its 135 foot length, the barge transported 380 tons of Liquid Chlorine on its maiden voyage in September from Natrium to Charleston, W. Va. Formerly, all river shipments had been limited to one-ton containers—a slow and tedious handling method in comparison with the new barge. This is the latest of numerous improvements in the transportation of Chlorine and other chemicals introduced by Columbia.

CHLORINE MARKETS—If you are interested in developments in the manufacture of Chlorine and the probable part this chemical will have in the postwar period, an enlightening analysis is presented in the article published in the August issue of *Chemical & Metallurgical Engineering*, page 115. Included are data on plant expansion and manufacturing methods, new and potential uses of Chlorine.

COLUMBIA RESEARCH—Though they have not been glamourized, the activities of Columbia's Research Laboratories have contributed much to the nation's war effort. Synthetic, natural and reclaimed rubber, textiles, plastics for aircraft, water purification and chemicals for other military uses—these are but a few of the important fields in which this research has played a vital role. And it will have an equally important part in serving the world's needs when peace has been restored.

NO INHIBITORS are required in Columbia's thermosetting plastic, Allymer, to prevent polymerization while in storage. Allymer may be stored under ordinary conditions for several months without appreciable change. This stability eliminates the distillation or washing processes necessary for removal of inhibitors used in older monomers, and facilitates mass shipment and storage. Data and reports of extensive research on Allymer may be obtained on request.

COLUMBIA CHEMICALS include Soda Ash, Caustic Soda, Sodium Bicarbonate, Liquid Chlorine, Silene EF (Hydrated Calcium Silicate), Calcium Chloride, Soda Briquettes, Modified Sodas, Caustic Ash, Phosflake, Calcene T (Precipitated Calcium Carbonate) and Calcium Hypochlorite

INSIDE NEWS

NOVEMBER PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1944

Streptothricin Joins Leaders in War on Disease

A new chemical has been discovered that is effective in killing germs that survive even after the application of penicillin or sulfa drugs. The new disease-germ killer is streptothricin.

Like penicillin, streptothricin is produced from a common mold, a type of soil bacteria called Actinomyces lavendulae. This organism is generally found in garden and field soils.

The new agent is reported to kill 25 different kinds of bacteria. Among these are two germs penicillin can't overpower: those of typhoid and dysentry. It has been found that streptothricin attacks effectively both gram-positive and gram-negative germs—the two divisions into which disease organisms are classified. Penicillin, incidentally, only kills or controls gram-positive germs.

Current uses for streptothricin are limited to war: on the front lines, in the treatment of wounds, infections and burns that do not respond to penicillin or sulfa; behind the lines, in preventing undulant fever and typhoid. It is also reported that streptothricin prevents the further growth of the tuberculosis bacillus.

Although this new drug is strong and effective, it is not as harmful as penicillin when taken in large doses. In fact, more than 10 times the required dose to effect a cure is needed before toxic symptoms appear. While penicillin can only be administered by injection, streptothricin holds the advantage because it can be taken either by mouth or injected into the system. As it is easily dissolved, the human body picks it up quickly. In spite of the fact that streptothricin, like penicillin, is an organism killer, it does not, however, damage human tissue outside of the germ body.

There are diseases where one agent can do the trick. Others require a combination. In the future, tests will show that the use of streptothricin alone, or in combination with penicillin and possible sulfa, will cure other ailments. Time and tests only will tell. 791

Clean Egg Shells

The use of antiseptic and bacteriostatic substances, or of coatings which will prove barriers to infection, has been suggested many times for washing shell eggs intended for storage. One of the most recently reported is referred to by the investigators as E-607, or, more precisely, lauric and myristic acid esters of colaminoformylmethyl pyridinium chloride.

E-607 in the wash water reduces the bacterial count from the 3 to 6 million retained after washing in plain water to a few thousand or less. Before washing, a typical count is 20,000,000. The bacterial count is not the only factor involved in keeping quality, but it is one of the factors to be controlled if storage eggs are to remain fresh and palatable. 792

Fresh Fish,—And We Can Prove It

University of California research workers have developed a mechanical nose which detects and evaluates the smell of fish, fresh or canned, and of other protein foodstuffs, more quickly and accurately than the usual organoleptic test panel and without the individual idiosyncrasies to which organoleptic tests are liable. A measured volume of air is passed over the sample, properly prepared, and the total amount of gas of the type that results from enzymic or other decomposition reactions is measured. Although these gases differ, depending on the organisms present as well as on the material under test, a common denominator in their chemical behavior has been found to be the reducing action. An alkaline potassium permanganate solution is used to measure the reducing action. 793

Green Tomatoes

Green tomato relish and crispy thin slices of sweet green tomato pickle have been farm kitchen delicacies since our grandmothers' days, but their commercial development has lagged. A wartime research project at one of the larger agricultural colleges, coupled with a season when cucumbers for fermentation became scarce and unripened tomatoes plentiful, led to the commercial salting of green tomatoes, with subsequent production of process dill pickles, relish and sweet pickle slices. The green tomatoes can also be fermented in brine, with dill weed, to yield a product with the flavor of genuine dill pickles. 794

Flash Burn Protective Cream

This flash burn protective cream according to many reports is one of the outstanding developments of the war. While at the present time a war-time product, its peace-time uses will protect many in industry from flashes from fire, electric circuits, gas flames, etc. 795

Electronic Painting

Electronic painting has been used for sides and rear of an object usually difficult to reach. An electronic tube gives the paint a negative charge, this flies to the positive charge sides or rear while spraying. Much of the waste in rust is saved by this method. 796

Nutritional Candy

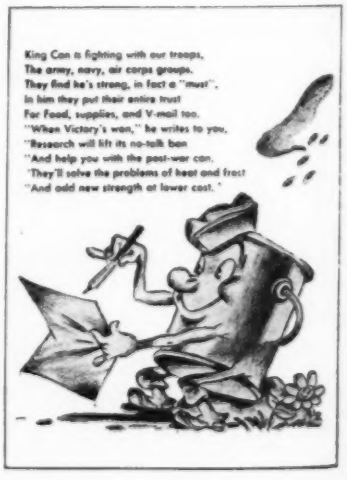
Experiments in the use of new agricultural products in the candy industry have already borne fruit in the shape of candy of conventional type and taste, but containing increased quantities of thiamin, riboflavin, niacin, calcium, phosphorus and other food constituents accepted as necessary in proper nutrition. No synthetics are used, and the purpose is not primarily to make candy a nutritive element; it will remain a confection eaten because it is delicious. But these candies, including nougats, chocolate dipped fig rolls, caramels, fudge, etc., using such products as cottonseed flour, peanut flour, wheat protein flour, low-fat soy flour, etc., open a new horizon for the industry. 797

Cabbage Juice

Cabbage juice has been found to have germicidal properties in experiments at New York State Experimental Station at Geneva. Grain negative bacteria, found in the leaf of the cabbage, and also a food poisoning organism (staphylococcus aureus) and a sanitary organism (Eschenchia coli) were destroyed by the substance in the cabbage juice. 798

Colloidal Graphite Impregnation of Leather

When leather is impregnated with colloidal graphite it takes on a grey luster, acquires increased resistance to heat, exposure and moisture and shows good electrical conductivity. The graphite particles, in order that they may penetrate the leather and spread evenly through the pores, are dispersed in an olive oil soap solution that is suitable for spraying, painting or dipping. 799


King Can is fighting with our troops,
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Protective Creams and Industrial Dermatoses

Owing to the allergies and sensitivities of individual workers and the varied assortment of industrial hazards, it has been necessary to produce an assortment of protective creams formulated for specific protection. Consequently, an extensive line is necessary to care for all types. 800

Citrus Juices

When salt is added to citrus juice before it is processed, the fats, oils and other rancidity-producing substances will separate and float to the top, where they can be removed before the hot juices are sealed in the container. The quantity of salt required is not sufficient to injure the flavor of the juice. 801

Cotton Worm Enemy

Insect eggs from Argentina have been flown here to hatch a deadly enemy of the dreaded cotton leaf worm which threatens Southern cotton. 802

Thirst Quencher

According to a British scientist the sensation of thirst can be entirely suppressed by rinsing out the mouth with a weak solution of cocaine. 803

Russian Serum

Selected patients at an unnamed British hospital are receiving treatments with a new serum which was sent from Moscow to the Empire Rheumatism Council. The serum is stated to have been used with success in Russia for bone fractures, arthritis, burns, typhus, peurperal fever, pneumonia and tonsilitis. 804

Insecticidal Action of Inert Dusts

Recent investigations on the insecticidal action of inert dusts show it to be highly probable that such dusts owe their action to their abrasive effect in removing the film of wax which lies outside the insect's epicuticle thereby speeding up the rate of loss of vital moisture by the insect. Work carried out on Drofophila flies, house flies, house spiders and mosquitos has shown charcoal of plant or animal origin to be the most effective of the various dusts tested. 805

Treatment of Burns

Efficacy for the treatment of burns, is claimed for a mixture of equal parts of prontosil with tannic acid in the form of an impalpable powder which is blown on the surface of the burn with an atomizer. The protective layer so formed is said to reduce the healing period and to keep scar formation at a minimum. 806

Technical Topics

MANGANESE DEFICIENCY — Manganese deficiency of fruit trees has been quickly corrected in England by injecting solid manganese sulphate into large branches and trunks of cherry trees, restoring green color to the leaves which were chloric through manganese deficiency. A solution of manganese sulphate could be used either as an injection or a spray. 807

PERSIC OIL — Last war, we saved peach pits for gas masks, — this war, the Australians save them for food. A "fixed" edible oil, undistinguishable from almond oil except by colorimetric tests, is being produced commercially in Australia from peach and apricot kernels. Officially designated "persic oil," it is described as a clear pale yellow oil, with a slight and characteristic odor, bland and nutty taste. It can be used interchangeably with other edible oils such as almond, cottonseed, corn, olive, peanut and sesame. 808

PECTIN SUGGESTED AS EMULSIFICANT—Pectin is suggested to replace acacia as an emulsificant for cod-liver oil or petrolatum oil. It is used in the proportion of 1 gram to 50 c.c. 809

EMULSIFIED LINIMENTS—Stability of emulsified liniments of the ammonia type is increased by the addition of carbon tetrachloride, which equalizes the specific gravity of both the inner and the oil phases. 810

OXIDATION OF ETHER—Propyl gallate is reported to inhibit autooxidation of ether, with the formation of peroxide, when present to the extent of but 0.005 per cent under conditions most favorable to oxidation. Minute traces are protective under normal conditions. 811

EFFICIENCY OF FLYSPRAYS — Efficiency of flysprays containing pyrethrum and an alkyl thiocyanate is increased by the addition of ethleneglycol ether of pinene. 812

COLLOIDAL LEAD IODIDE FOR DISSOLUTION—Colloidal lead iodide for dissolution in motor fuel is produced by mixing 10 grams of acetate of lead, dissolved in 500 c.c. of 1 per cent aqueous solution of glucose, and 10 grams of potassium iodide, similarly dissolved, boiling five minutes, cooling to 37.8°C., and filtering. Subjection to 0°C. produces crystalloids, which can be separated by centrifuging and dried. 813

LAURYL SULFONIC ACID SODIUM—Lauryl Sulfonic Acid Sodium has recently been proposed for use in toothpastes in place of soap in quantities of one to three per cent. Experiments with certain specified doses of this product resulted in non-detrimental effects, indicating that this material is not harmful to humans. Many other experiments have been carried out to determine the desirability of soap in toothpastes with interesting results. 814

RUTIN — Renewed interest has been stimulated in rutin, an effective therapeutic agent in the treatment of increased capillary fragility. Its extraction is from flue-cured tobacco, and then percolated with alcohol. 815

ELECTROLYTIC TREATMENT — Electrolytic treatment in molten caustic soda pickles mild, silicon, and stainless steels to produce a surface highly suitable for plating, galvanizing, vitreous enameling, and painting. It also imparts some degree of rust resistance. 816

ALCOHOL-SOLUBLE RESINS — A new group of alcohol-soluble resins, useful as heat-sealing, grease-resistant coatings for food containers and as protective coatings for wood and metal, has been developed and is now in commercial production. 817

SOAP — Irritative effects of cocoanut oil soaps on some skins are attributable to the short-chain fatty acids of the oil (caproic, caprylic and capric), rather than to the long-chain acids (lauric and myristic). Myristic acid is said to make the most skin-gentle soap. 818

ALUNITE MUD — Development of an alunite mud in Western Australia as a source of aluminum, as well as sulphate of potash and glauber's salt, has been started in a plant at Lake Campion. Production of the alkaline sulphates is reported running at 5,000 tons a year. 819

LEVULOSE—A levulose is obtained containing syrup by a new method recently patented. Levulose in essence is fructose—the element which makes honey sweet—and is much sweeter than dextrose. 820

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquiries to the original source of the article. Write to National Can Corporation, 110 East 42nd Street, New York City. Please mention the number at end of article — also name of the magazine you saw it in.

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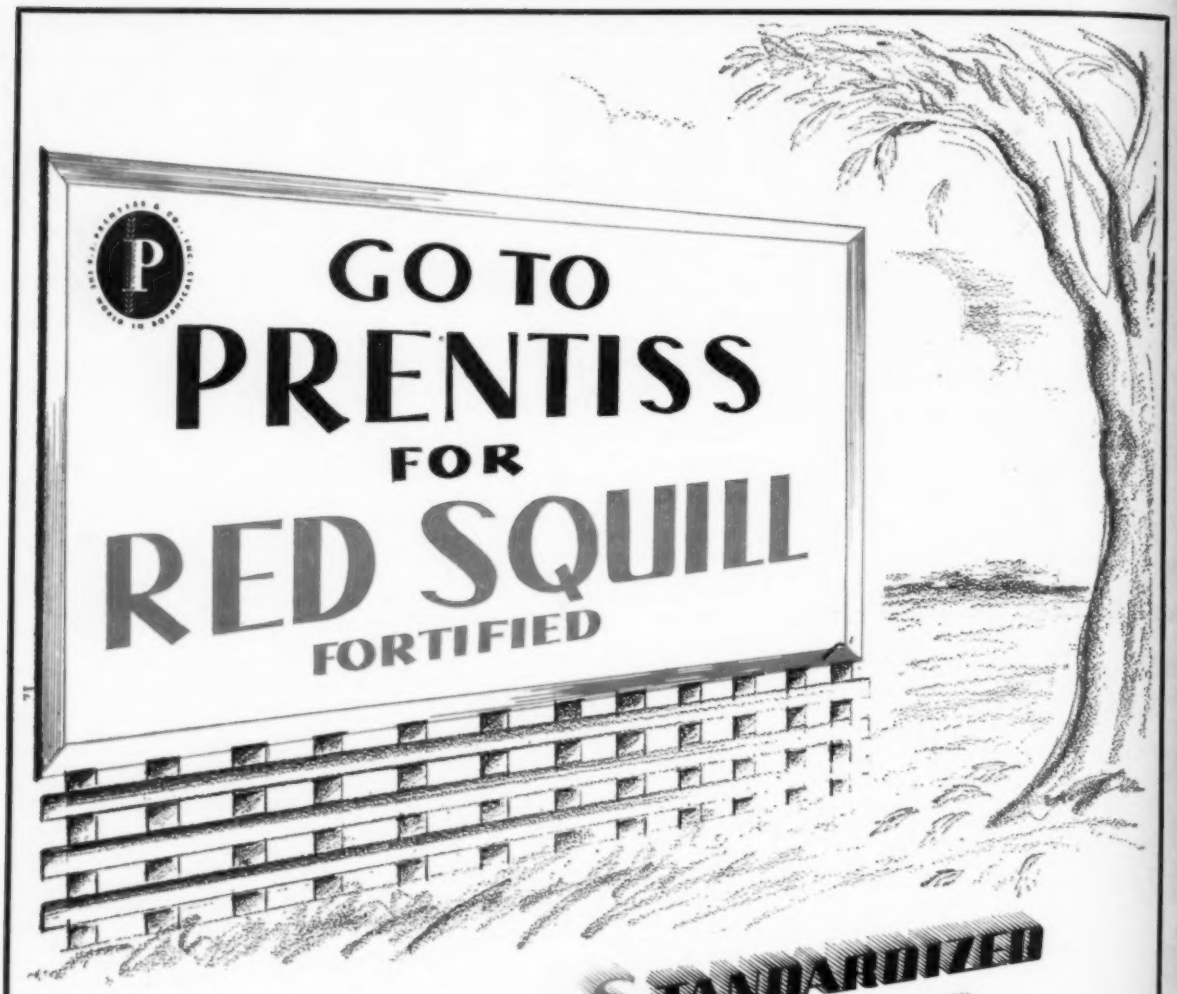

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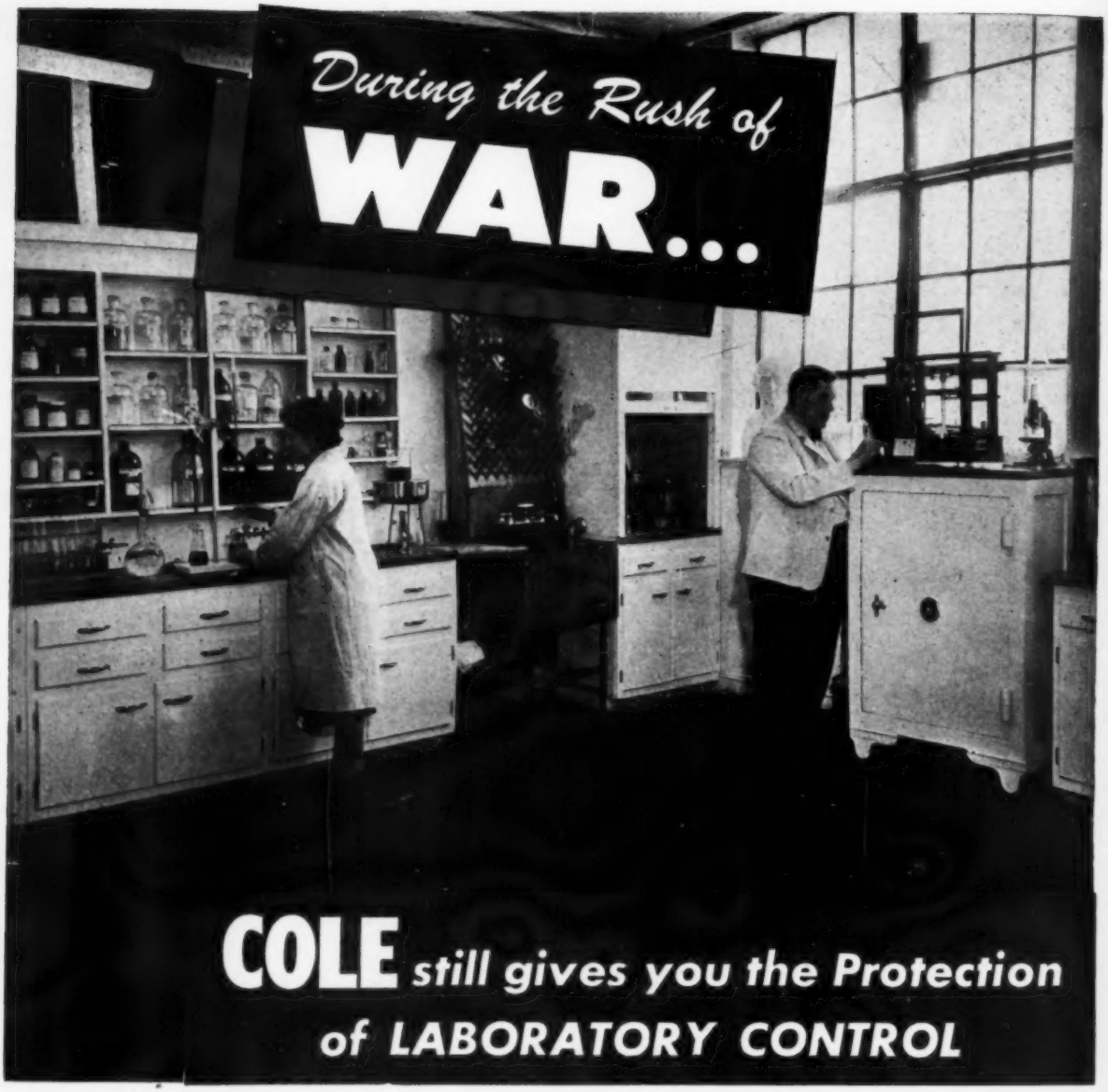

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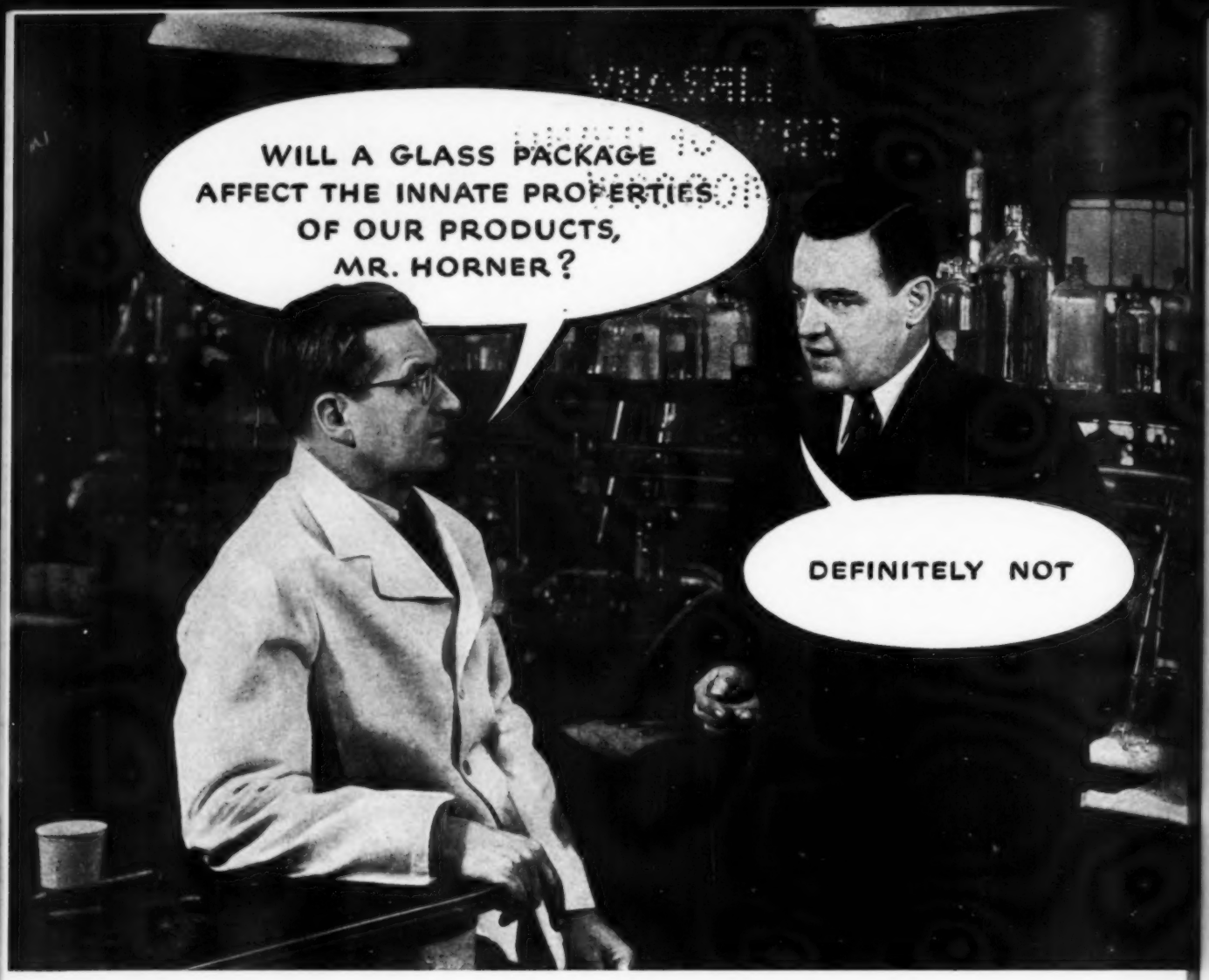

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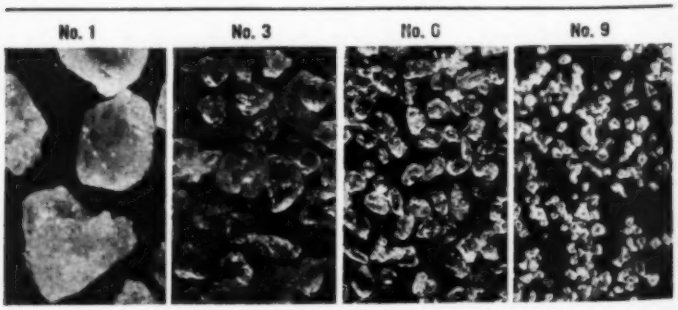

Official U. S. Marine Corps Photo

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Victory depends upon materials—as well as men! To keep our American forces "closing in" overseas, you and every other manufacturer here at home must *keep on making* "Out Front" War Bond Quotas!

This means *action now* on *every* point in the fighting 8-Point Plan to step up Payroll Deductions. For instance, have you a 6th War Loan Bond Committee, representing labor, management and other important groups in your company? Selected Team Captains yet—preferably returned veterans? If so, have you instructed them in sales procedure—and given each the Treasury Booklet, *Getting the Order?*

How about War Bond quotas? Each department—and individual—should have one! Assigning responsibilities is vital, too! Have you appointed enough "self-starters" to arrange rallies, competitive progress boards and meeting schedules? Are personal pledge, order or authorization cards printed, and made out in the name of each worker? Planning for resolicitation near the end of the drive? Your State Payroll Chairman is ready now with a detailed Resolicitation Plan. And, have you contracted for space in *all* your regular advertising media to tell the War Bond story?

Your positive *Yes* to *all* points in this forward-to-victory 8-Point Plan assures your plant meeting an "Out Front" Quota in the 6th War Loan—and speeds the day of unconditional surrender!

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SANITARY PRODUCTS

A SECTION OF SOAP

Official Publication National Association of Insecticide & Disinfectant Manufacturers

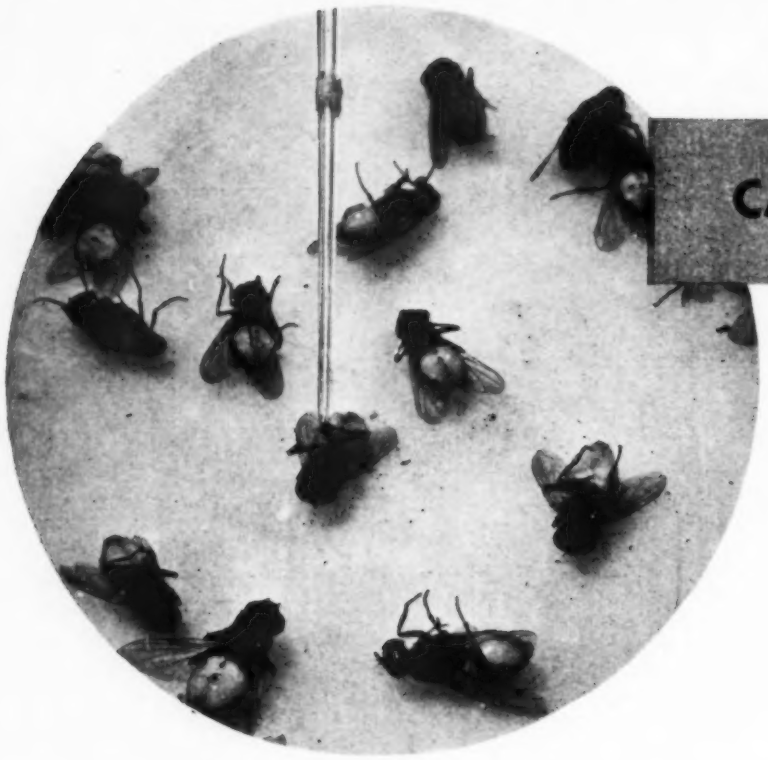
REPORTS on DDT appearing in this publication in the past have not been accurate if we may judge by the statement of Dr. W. E. Dove of the Bureau of Entomology and Plant Quarantine before the recent meeting of the National Pest Control Association. At least, he stated that only one magazine—not this one—had published accurate information on DDT. If this is true, maybe various departments of the government should get together and agree on their stories before anything is released to the press.

Not in many a year have we seen such a scramble for publicity as the attempts to hitch on to the tail of the sensational DDT kite. We have had a grand-stand seat to watch the pushing and shoving in and around Washington to claim credit for discovering, inventing or developing DDT. We watched for over a year a stream of ballyhoo fed to the newspapers and general magazines of the country—first from one department and then from another—and most of it obviously sent out to ride the wave of publicity which this revolutionary insecticide product had stirred up. In most every instance, the "information" was of the sensational variety, the kind which makes newspaper front page stuff. Not too much credit was given to those behind the scenes who carried on the bulk of the research—and too often only a small fraction of the true facts were given.

On one hand, Washington held all DDT data as "restricted." On the other, over fifty reports of DDT research findings were published in one scientific journal to the exclusion of all other trade and scientific publications. Attempts to obtain real facts for publication through regular channels invariably were not successful. Only the usual publicity drivel was freely available—and this the newspapers, magazines and columnists lapped up avidly—which is probably the way it was intended anyway.

When Dr. Dove infers that little accurate information on DDT has been published, we suggest that he look for his reasons right in Washington, particularly among those who love sensational newspaper stories but cannot be bothered too much with the dissemination of facts sans baloney for the general trade, business and scientific press. He will find that DDT has been more than an important insecticide development—it has been also a government department publicity football for a year or more to produce the finest hodge-podge of misinformation which we have viewed in many a year.

THE recent American landing in the Philippines offers hope that within the coming six month period,—or perhaps even sooner—the Japanese may be cleared out of the South Pacific, giving the Allies access once more to the producing areas from which the major share of our rotenone supplies normally comes. Victory in Europe, welcome as it will be, cannot be expected, we must remember, to effect any improvement in our supply situation on insecticide raw materials. The cutting of the Jap communication lines to the South Pacific, however, could in the course of the coming year help a great deal on rotenone supplies.



CAMERA TRIP TH

A PICTURE STORY OF INSECTICIDE TESTING AT STANCO LABORATORY AT BAYWAY

A NUMBER of unusual and entomologically interesting variations in the rearing and testing of insects are evident at the entomological laboratory maintained by Stanco, Inc., subsidiary of Standard Oil Company (N. J.) at Bayway, N. J. The laboratory is housed in atmospherically controlled quarters so that test insects will be assured of reaching maturity in thoroughly resistant condition, and so that conditions of temperature, humidity, etc. can be maintained at predetermined and unvarying levels during all tests.

Ten thousand flies are hatched daily in the fly breeding quarters to assure an adequate volume of test insects, and mosquitoes and roaches are also raised for test purposes. The mosquito eggs are incubated in flat white enamel pans placed in distilled water and kept at an even temperature until they hatch out into wigglers. Novel is the provision of play cages for roaches. There are large glass jars supplied with dog biscuits and water, and warmed to optimum temperature. Cones are placed inside the jars so that the roaches may have access to the darkened interiors, as they of course prefer to withdraw from direct light.

For fly testing purposes the Stanco laboratory uses two tests—the usual Peet-Grady technique and the "drop test." Incidentally the Peet-Grady test chamber illustrated on the facing page features a port sunk into the chamber. (This is apparently designed to allow the operator to observe the effect of the spray on the flies more closely, but it would seem to offer some possibilities of variable results as compared to the standard chamber which is supposed to be a perfect cube, lacking projections or indentations. *Ed. Note.*)

The drop test is conducted by application of a minute drop of the insecticide directly to the fly, after it has been paralyzed by chilling. Chilled flies are placed on cold marble slabs for the test, as they would recover quickly if placed on a warm surface; chilled, they remain in a dormant state. After drops of insecticide are applied, flies are removed to glass jars, and supplied with food and water. The results of the drop test are closely observed and records are established of deaths, just as they are in the Peet-Grady test.

Thousands of roaches are bred for test purposes at Bayway, stock being maintained of the American, German and Oriental varieties. The method used by Stanco for testing effectiveness of insecticides against roaches, which are of course much more resistant than flies or mosquitoes, is a variation of the drop test. The

Technician gathers fly eggs and places them in a glass tube preparatory to removing to jars filled with rearing media, where eggs hatch.

Photos by Esther Bubley and Gordo

STANCO'S ENTOMOLOGICAL LABORATORY

roaches are first made dormant by chilling and then a drop of the insecticide is applied.

Insects are raised from the egg stage and most of the eggs are hatched in the laboratory, with the exception of certain types of mosquitoes. The latter, when not available in New Jersey swamps, are collected by mosquito egg gatherers and shipped from Florida low lands. These eggs packed in moist cotton are transported by air in pill box containers; others are selected from breeding pans where the female lays her eggs on wet blotting paper. All types of eggs are floated in pans of distilled water, where mosquito wigglers emerge to feed on preparations of dried blood albumin and yeast. As wigglers develop they change to a third stage called the pupa stage. This is a shell-like stage, which resembles the original egg from which it has evolved. The pupae are transferred to another set of cages where they are placed in water-filled, open-top containers. When the pupa shell cracks, a full grown mosquito emerges. The newborn insect then floats around on the pupa shell until its wings dry and strengthen. Mosquitoes are used by the thousands in the Stanco laboratory for repellent experiments, as well as for the development of more efficient and toxic insect sprays.

Ten thousand flies are hatched daily out of eggs collected from fly cages. Eggs are carefully measured before their transfer to jars of moistened dairy bran and malt, a mixture especially compounded to nourish maggots after they hatch from the eggs. Flies, too, pass through the shell-like pupa state, and these, like mosquito pupae, are placed in cages where flies emerge when pupa shells crack open. Technicians administer daily feedings of milk and sugar, which builds great resistance

Entomologist F. C. Nelson carefully separates wigglers from hatching pans where they are placed in glass containers during pupa stage. Wigglers are kept in distilled water and fed on dried blood, albumin and yeast. Water in hatching pans is warmed by heat control apparatus.

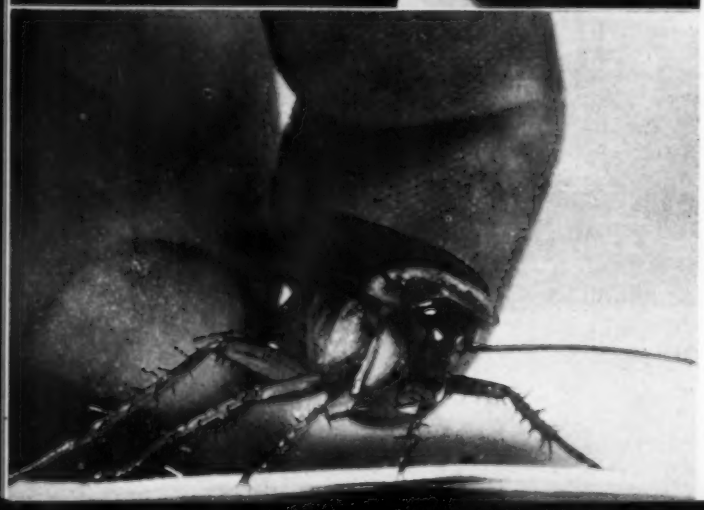
Flies downed in Peet-Grady test are removed from the chamber by technician. Downed flies are carefully moved to recovery cages where food and water are provided. Those that recover within a 24-hour period are of course deducted from the total in determining final kill figure.

A technician watching paralyzed flies fall as clock (left foreground) registers time of kill. Records are kept of percentage of deaths and speed of paralysis as all formulae must undergo proving tests before being placed on the market.

Ten thousand flies hatched daily are used for experimental purposes in testing the effectiveness of insect sprays. Here a technician carries a cage into test room where Peet-Grady Test is made.

After the flies are removed from the Peet-Grady chamber and placed in recovery cages, a technician makes a count after 24 hours.

Technician below runs chemical analysis on finished insecticides and new toxic material.



(Lower left) Closeup of the American roach (Periplaneta Americana, Linne) big and robust roach that is said to be toughest to eliminate.

(Bottom right) F. C. Nelson, entomologist, removes an American roach from "play cage."

in flies, preparatory to insecticide tests. The milk mixture, whipped with an electric machine, is employed to moisten cellulose cotton, which provides feeding and breeding ground for flies.

The female roach is preferred for testing as she is hardier than the male, but because the females are usually reserved as a breeding colony they are separated from the male species and males are used almost exclusively for test purposes. The female roaches are placed in "maternity wards" where they are bred with the hardiest of the male colony. Unlike flies and mosquitoes, these bugs go through no pupa stage, but are hatched from egg capsules that the females carry on their stomachs until the capsules mature, then drop on wire netting floor of "ward." When the capsules crack, the completely formed nymphs emerge and crawl down through the mesh flooring to join the infant roach colony. They feed on dog biscuits and water, a diet identical with that of the adult bugs.

In addition to insecticides of various types which Stanco has long made for the general public, and is now supplying in large quantities for military use, the company has also been prominent in the development of insect repellents for war time use. The development in the repellent field in which Stanco has played the most important part is dimethyl phthalate, now being used in large quantities by

(Turn to Page 137)

RED SQUILL

as a raticide...

By Dr. Dorr D. Green,*

Chief, Division of Predator & Rodent Control
Fish & Wildlife Services, U. S. Department of Interior

THERE are four essential qualities for an ideal poison for use in rat control and these are safety, effectiveness, economy, and availability. In 1923 the principal rat poisons on the market in the United States were arsenic, barium carbonate, phosphorus, and strychnine. Each of these toxic agents had inherent qualities which prevented them from being the ideal poisons for control of rats in and around residences, business establishments, and farm buildings. They were dangerous to all forms of wild and domestic animals and to human beings. A raticide devoid of these hazards was needed. To this end a search was made of literature relating to rat control work in other countries and of the qualities of many known poisons. This led to a detailed study of red squill by the former Bureau of Biological Survey, U. S. Department of Agriculture (now Fish and Wildlife Service, U. S. Department of the Interior) in cooperation with other Bureaus of the Department.

Description and Source

THE squill plant has been known for centuries. There are two commercial varieties which have not as yet been distinguished botanically. White squill, which is generally marketed as dry, white scales, is the product official in pharmacopoeias and is used in medicine as a heart tonic, an emetic, and for other medicinal purposes. Red squill has all the properties of white squill but in addition contains active toxic constituents which have not been chemically isolated and identified. In this paper I am concerned only with a discussion of the red squill variety.

Red squill, called also Scilla, or sea-onion, is a perennial plant belonging to the lily family and technically known as *Urginea maritima*. It grows wild in Sardinia, in Sicily, and along the shores of the Mediterranean and Adriatic Seas in Italy, in Greece, Syria, Lebanon, and in Northern Africa, particularly Algeria. It also grows to some extent along the shores of other countries bordering the Mediterranean Sea. The onion-shaped bulbs may attain a weight of 8 to 10 pounds in 5 or 6 years but those from which the squill powder is usually made weigh 1 to 8 pounds. They grow along the seashore where the sandy loam soil is moist, or back in the hillsides where the soil is more gravelly and dry. The pointed, bladelike, deep-green leaves may attain a height of about 2½ feet. Their growing period is from late fall to early spring. In May or June the leaves start drying up and a fruit stalk shoots up 4 to 5 feet in length on which are borne many small white flowers. The fruit is a 3-celled capsule with flat seeds having a thin black shell.

In Italy squill has been grown successfully under cultivation on a small scale, the bulbs attaining an average weight of about 5 pounds in 5 or 6 years. Early attempts to grow toxic red squill in the United States were not promising. Recently, however, the Fish and Wildlife Service and the Bureau of Plant Industry, in cooperation with the University of Beirut, Beirut, Lebanon, began a study of the red squill plant in its native habitat in order to learn more about the varieties of squill, their toxicities, their soil, moisture, temperature, and other climatic requirements. These studies were followed by research in the United States which included the determination of the most favorable soil, climatic and cultural requirements of the bulbs, and their response to plant breeding. Bulbs are now being grown in several locations across the southern part of this country from Florida to California. Studies are now being made in Lower California in cooperation with the Foreign Economic Administration. We hope that much valuable information will be gained from all these studies directed to the end that an adequate supply of satisfactory toxic squill bulbs may be produced.

Early Use as a Raticide

RED squill was used in Denmark and other European countries as a rat poison previous to 1907. Its emetic character had been observed and also the value of this characteristic as a safeguard for animals that vomit had been established. Since rats do not have the power to vomit, this peculiar action of squill did not reduce its efficiency. Even though red squill was more or less a specific for rats, it did not become popular imme-

* Before the National Association of Insecticide and Disinfectant Manufacturers, Inc., June 12, 1944, Chicago.

diately as a raticide mainly because the red squill powders varied greatly in toxicity. This was the situation in 1923 when the Department of Agriculture became interested in the material and began the investigations I have already mentioned.

To locate the reasons for the wide variation in toxicity, fresh bulbs were obtained from the Mediterranean countries and subjected to different treatments in the course of preparing the powdered product. Powders prepared from the bulbs under varying conditions killed ½-pound rats (227.3 gms.) in doses varying from less than half a grain (32.4 mgs.) of squill to more than 35 grains (2268 mgs.); thus exhibiting a variation in toxicity from 142.5 mgs./Kg. to 9980 mgs./Kg. The Department's studies of numerous manufacturing processes demonstrated that it was necessary to dry red squill under controlled temperature conditions in order to obtain a powder of maximum toxicity. The bulbs were sliced thin and subjected to a temperature of 80° C. (176 F) until thoroughly dried. The slices were then pulverized in a hammer mill until the resulting powder would pass through a 40-mesh sieve. When the powder was then packed in air-tight containers it retained its toxic power unchanged for several years.

The bulbs that were imported from 1926 to 1935 and prepared in the manner that has been described produced a powder of satisfactory killing power, though there was some evidence that the toxicity at the end of this period was somewhat less than at the beginning. Information available indicated that the bulbs of the later importations did not have the same toxic power. A check of the manufacturing process showed no change in the procedure. More and more users of the red squill powder sent in complaints that satisfactory results were not being obtained. From these facts it was determined that proper drying, pulverizing and packing were not the only problem involved.

Recent Research Studies

TO solve these problems, intensified research was begun at that time by the Fish and Wildlife Service through cooperative projects with Universities and Colleges and at the Wildlife Research Laboratory, Denver, Colorado. More attention was given to extracting the active toxic principle in the red squill bulbs. Considerable progress has been made in isolating this principle though as yet a pure crystalline chemical product has not been obtained. However, investigators have produced a concentrate that has shown a toxicity of 10 mgs./Kg.

Research students at Massachusetts State Agricultural College prepared an extract which at a certain stage in the process was mixed with wheat bran and thoroughly dried. This blended material was mixed with suitable baits. Difficulty was experienced in obtaining uniform concentrations with the separate extractions of single lots of squill and thus they were unable to produce a standard toxic blended product to mix with bait materials.

This development at Amherst, Mass., was soon followed by the present fortification process devised by the Wildlife Research Laboratory at Denver, Colorado, operated and maintained by the Fish and Wildlife Service. The process of fortification incorporates three well-known methods of drug extraction—agitation, maceration and percolation—operated in a countercurrent system whereby the solvent becomes saturated with inert material in the first stage of the process, and in the following stages becomes increasingly potent with respect to the rat-killing principle. This makes the combined concentrated dry extract many times more toxic on a weight basis than can be obtained by a series of separate extractions of a single lot of squill. Instead of using a foreign material as bran as a carrier and drying material, this process uses the proper amount of the original lot of squill powder, the toxicity of which has been ascertained by bioassay. Knowing this potency and the degree of fortification, it is possible to determine the toxicity of the final product within 100 milligrams which is close enough for all practical purposes.

Paralleling the development of the fortification process other research studies were also in progress. One was the standardization of a bioassay method for red squill powder. It was necessary to determine a standard bait material, weight of rat that was best to use, and procedure in feeding and checking results. When these things were completed, a discrepancy between results obtained on repeated tests was discovered. It was soon found that there was a marked difference in the susceptibility of sexes of rats to the action of squill. The males required two or more times as much to kill as did the females. Males weighing 150 to 200 grams were then selected as the standard animals for use in conducting bioassays.

Then, another discrepancy was observed. The same lot of squill when used at sea level and at an altitude of 5280 feet under the same technique showed a marked variation in toxicity. It required almost twice as much of a given squill sample to kill the same weight of male rat at sea level as at a mile-high altitude. This fact is true of several drugs commonly used in medicine. In this regard, females do not show as wide a variation as do males.

Timeliness of New Developments

FORTUNATELY for all of us whose business takes us into the field of rat control, all of these developments came at about the right time. When war suspended the shipments of squill, and bioassays were made of the stocks on hand in this country, most of the lots were found to test 1500 to 2000 mgs./Kg., which indicated they were much too weak to be used successfully in rat control. The fortification process which had been developed made it possible to increase the potency of these weak red squill powders to the point where the concentrate could be used efficiently in rat-control operations.

We have derived a great deal of pleasure in working with WPB, U. S. Commercial Co., the Foreign Economic Administration, and the various red squill manufacturers in arranging a system of handling the weak squills so that the public is able to obtain squill powder of a toxicity that

(*Continued on Page* 133)

CONTROL OF AIR-BORNE BACTERIA

CROSS infection in the hospital ward is a factor which may convert a place for healing the sick into a clearing house for diseases. Even with the emphasis which modern standards place on cleanliness as the best disinfectant, bacteria still finds a lodgement in the dusts inevitably created in sickroom conditions. The practice of oiling floors has been proved a good method of fixing bacteria-bearing dust particles, and the extension of the treatment to blankets has been even more effective.

It has been found that blankets can contain 3 per cent, and sheets 6-7 per cent of residual oil without feeling oily. It was proved that a reduction of 90-95 per cent of the streptococci present in the ward dust was effected. Results show that oiling of floors was not sufficient to reduce the spread of streptococci in measles wards, but that when both floor and bed clothes were oiled there was an average reduction of 97.5 per cent in the streptococcal count in the air during bed making, and that the average total bacterial count was reduced by 91 per cent. It was also found that the cross-infection rate was reduced to 18.6 per cent in the treated ward as compared with 73.3 per cent in a control ward where oiling was not employed.

The oil may be applied to blankets as a dilute oil-in-water emulsion stabilized with a cetyl pyridinium bromide emulsifying agent. The emulsion should be at pH 8, so that the cation-active agent is rapidly absorbed by the wool. The waste liquor is aqueous. Twenty per cent oil emulsions were made up and diluted as required. An example of proportions is as follows:

Wool fabric	100 gms.
Soft water at 100°F.....	1000 cc.
Positively charged stock emulsion stabilized by "Fixanol C"	25 cc.

The fabric was squeezed in this liquor for about 10 minutes, when all the oil had apparently been taken up by the wool, and the waste liquor was clear. It was then hydro-extracted and air-dried. Instead of the calculated 5 per cent of oil, the oil content was 4.8 per cent.

Cotton Fabric Treatment

With cotton fabrics difficulty was found in obtaining absorption of the oil, so that half the requisite amount of oil was added as a positively charged emulsion and the remainder added later as a negatively charged emulsion, the formula being:

Cotton fabric	100 gms.
Soft water at 100°F.....	1000 cc.
Positively charged stock emulsion stabilized by "Fixanol C"	17.5 cc.

After two or three minutes, the following was added:

Negatively charged stock emulsion stabilized by "Teepol"	17.5 cc.

The oil content of the cotton by this method was calculated as 7 per cent, found 6.9 per cent.

The oil used was technical white oil, the positively charged emulsion containing 2 per cent of "Fixanol C," an agent similar in type to cetyl pyridium bromide, and the negatively charged emulsion contained 3 per cent of "Teepol." This is an anion-active compound containing the sodium salts of sulfated secondary alcohols. Twenty per cent of oil was used in the emulsion in both cases, emulsification being effected by passage through a jet emulsifier. The emulsions had to be shaken before use.

Disinfectant Sweeping Compound

As the basis of a sawdust preparation to be used on the floors of public places, sawdust was well mixed with 10-15 per cent of its weight of sodium sulfate. This was mixed with a suitable quantity of spindle oil, such as 10-20 per cent, and about 5 per cent of formaldehyde solution. The odor of the formalin was masked by 1 per cent of an essential oil, and the whole mixture was colored with a water-soluble dye. This mixture was tried experimentally but as far as is known was not marketed commercially. *Manufacturing Chemist* 15, 291-2 (1944).

—— ♦ ——

As an antiseptic washing medium, solutions containing active chlorine are too corrosive, even in concentrations too dilute to be effective as a germicide. Corrosion is prevented by inclusion of sodium nitrite in solutions with which it is compatible. The formulas suggested for washing fisheries buildings and equipment are: 2.5 per cent of 40 per cent formalin in water plus 1 part in 2000 of sodium nitrite; also 5 per cent of sodium nitrite and 1 per cent of acetic acid in water. H. L. A. Tarr. Fisheries Research Board Can. Progress Repts. Pacific Stas. No. 59, 7-9 (1944).

Second Star for the Army-Navy "E" Flag of McCormick & Company, Baltimore, is presented to C. P. McCormick, president, by Major Gen. Philip Hayes, 3rd Service Command.

McCormick & Co. Honored for Army Lou

FOR its part in the continued high rate of production of DDT (dichloro - diphenyl - trichloroethane) insecticides and larvacide, four distinct products in all, McCormick & Co., Baltimore, manufacturers and processors of insecticides, spices, flavoring extracts, etc., received the second star to their Army-Navy "E" Award flag recently, it was announced early last month. This is the third award conferred on the company by the Army and Navy. In addition to manufacturing and processing these insecticides, McCormick & Co. was one of the companies that pioneered in the development of the original louse powder and subsequent insecticide products which eventually led to the present series of DDT war contract items.

According to the company, the present day louse powder being used by the armed forces went through the following stages of evolution. In the early days of the war the original formula was the old standby: pyrethrum insect powder. Following this came a period of experimentation from which was developed a purified derris extract, which was followed by an improved louse powder that consisted of pyrethrum extract and IN 930 impregnated into clay. It was this latter product that formed the bulk of the early fast schedule production at McCormick & Co., including the month of October, 1942, when every civilian order in the house was pushed aside for an entire month so that all available manpower and machinery could be utilized to turn out the required number of millions of cans needed by the Army for an emergency.

Amos Badertscher is credited by McCormick & Co. for having done so excellent job as chief entomologist in the development of the DDT products by the firm. DDT, it is said, was an improvement on the pyrethrum formula originally packed in two ounce cans, later packed in bulk, and thus led to the complete series of DDT products.

McCormick & Co. has pioneered in the production of the following DDT items and is working on current contracts on them at the present time: louse insecticide powder, DDT dusting powder larvacide, delousing insecticide spray, DDT residual effect insecticide spray and DDT concentrate insecticide emulsion.

Something of the production methods and health safeguards for the employees working in the McCormick plant was told in a recent story in the *Baltimore Evening Sun*. The story points out that McCormick, at one time or another, has 69 employees working on the processing of products containing DDT and that there are four of these products processed by the firm. All for use by the armed forces, they include: the residual spray, which is used in controlling bedbugs and flies in army camps; delousing spray for use on prisoners of war; delousing powder for servicemen and larvacide dust to be employed against mosquitoes. The sprays, according to the *Sun* article, are processed on one floor and when the gray, silty liquid is ready,

Right: Dr. Amos Badertscher, who is credited by McCormick & Co. with doing such an excellent job in developing the DDT products mentioned in the accompanying article. Dr. Badertscher was elected to the company's senior board of directors last March. Dr. Badertscher is a graduate of Bluffton College, Bluffton, Ohio; Ohio State University, and Rutgers University. He is a member of the Insecticide Advisory Committees of the WPB, WFA and OPA.

Typical DDT products manufactured by McCormick & Co. on war contracts. Packages range from two-ounce sifter-top spice cans for the individual soldier to five and 10-pound or 5-gallon metal containers.

Louse Powder Production Record

it is packed in olive drab, five gallon cans for shipment.

The delousing powder and larvacide dust are made in the same equipment at different times in a process completed over six floors. When it arrives from the producer, DDT is a whitish, sticky powder with a sweetish odor and not much taste. Coming in drums of 100 per cent strength, it is later reduced to 10 per cent and combined with other materials and processed into finished products.

Government inspectors first test the chemical. Upon meeting specifications, the batch then enters two mixers of 2,000 and 3,500 pounds capacity, respectively. In one of these, it is thoroughly mixed, sifted and milled and dropped through chutes to the floor below. The powder is weighed on the next floor and the cans are filled and dusted. Then the powder is moved to another floor where it is packed in wooden boxes strapped with metal and checked again by government inspectors before it is ready for shipment. McCormick louse powder is packed in two different sized containers depending on where it is to be used. For general use, it is packed in two ounce cans and for use in the occupied countries it is packed in five pound containers. Larvacide dust, which is under complete allocation by the War Production Board, is packed in 25 pound containers.

Because of the toxic nature of DDT, a rather elaborate system of health safeguards for the employees working with it, has had to be set up. This entails the use of special facial masks and filters, overalls and caps. Employees are X-rayed once a year and are given a physical examination and specimen analysis once a month. They are required to wear clean uniforms every day and are requested to bathe before going home at night. The use of a brush for scrubbing the hands before eating is also required.

These regulations were established by the company working in conjunction with Lieut. Col. Raymond Hussey, of the Surgeon General's office, Army Industrial Hygiene Laboratory, Johns Hopkins Hospital. Col. Hussey and his medical corps staff have acted as consultants in safeguarding employees from possible poisoning by DDT.

As for the postwar possibilities of DDT, McCormick officials estimate that as a result of refinements in production methods already established in the plant, a two-ounce can of a DDT insecticide will cost about 25 cents. Incidentally, it was these improvements in production methods that were in some measure responsible for the most recent Army-Navy "E" award.

McCormick's production of spices, etc., also contributed to the winning of the third "E" award. According to one army official these products are "vital at the front. They help avoid monotony in rations the men must eat under fire, and there's no morale builder like a good meal."

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N. P. C. A. Meets in Chicago Theo. Oser Elected President

THEODORE OSER
New N.P.C.A. President

WM. O. BUETTNER
Re-elected N.P.C.A. Secretary

THE annual meeting of the National Pest Control Association, which opened at the Hotel Sherman, Chicago, October 23, attended by a capacity crowd of over 600, moved into its final session two days later with the election of Theodore Oser, Orkin Exterminating Co., Atlanta, as president of the organization for the coming year. Regional vice-presidents are as follows: H. O. Abel, Abel Exterminating Co., Dallas; John G. Vogel, Vogel-Ritt, Inc., Philadelphia; Ernest G. Mills, Pacific Exterminator Co., San Francisco; Harvey W. Klein, Klein Exterminating Co., Milwaukee; J. Edwin Sameth, Western Exterminating Co., Newark, and J. Harvey Sturgeon, Sturgeon Pest Control Co., Louisville. William O. Buettner of Buettner Pest Control Co., Brooklyn, was re-elected as secretary and Robert C. Yeager, Rose Exterminator Co., Cincinnati, treasurer.

Two new directors were named, John Medoff of Hudson Exterminating Co., West New York, N. J., and Max Rukin, Industrial Fumigant Co., Chicago, replacing Robert C. Loibl, Sr., who resigned because of ill health, and J. Edwin Sameth, who is now serving as regional vice-president. Other directors whose terms run from 1944 to 1947 are as follows: Jerome L. Howell, Houston; Albert M. Akers, Cleveland; Morton S. Prescott, Chicago; Martin T. Meyer, Philadelphia; D. C. Tracy, Los Angeles; George Hemmert, Detroit, and Herbert Meyer, Jamaica, N. Y. The 1945 annual meeting will be held in New Orleans.

DDT was in the convention spotlight and much interest was shown in the program discussion of this new insecticide material,—particularly as to its potential post-war role. Characterizing DDT as "an insecticide which is both praised to the limit and accused as worthless," Dr. W. E. Dove, scientist in charge of the USDA investigations, recommended a "middle of the road" attitude until many yet unanswered problems are solved. "Let's push aside our enthusiasms" he remarked at one point, "and just use good judgment."

"We can look forward to the time when DDT will be available for civilian use," Dr. Dove declared, "but that time will not come overnight. Perhaps the product can be used on certain insects and later extended to others." He anticipates its use, he added in the form of sprays, dips, dusts and aerosols.

Emphasizing future developments in this latter use, he displayed a new type of "bomb," the size of a common flashlight, which holds four ounces of aerosol, which, he said, can treat 240,000 cu. ft. of space, where the same quantity of the aerosol in current use would treat only 150,000 cu. ft. This device, he predicted will "probably" have a place in household pest control operations. But it's not available yet—"only in the experimental stage."

DDT, he revealed, is now being incorporated with pyrethrum in the aerosol bomb and proving as effective against flies and mosquitoes as straight pyrethrum has been against the latter pest. There's a residue from the combination, however, which clogs the nozzle of the bomb and "we've not settled that difficulty yet," he reported.

Clear cut uses for DDT, when available after the war, would, he stated, be for killing bedbugs and other pests in sleeping quarters at night; for use in pantries and kitchens to kill roaches; and as a spray for livestock and against stable insects. Since DDT possesses possibilities for killing beneficial as well as harmful insects, much must be determined, he said, on where, when and how to use or not to use it.

DDT, he acknowledged, is a poison, if ingested in quantities and man can be injured if he breathes it. "But the quantity required is large," he continued. "If a man absorbs all the DDT in one ounce of louse powder, it's not enough to harm him. It can be used with caution, keeping in mind that long, repeated exposure is dangerous."

He related how applications of DDT in oil to animals had resulted in necroses of their livers, but that these injuries had been repaired successfully. At the Agriculture Department's Orlando, Fla., laboratory, he said, three men subjected for six months to heavy dosages in aerosol tests, had been examined carefully to determine if any injury had been done to their livers and no damage was found. Moderate doses had been given to pregnant ewes and normal lambs were born, with no evidence of abortion. Several hundred goats had been dipped in a DDT emulsion and examination of their eyes

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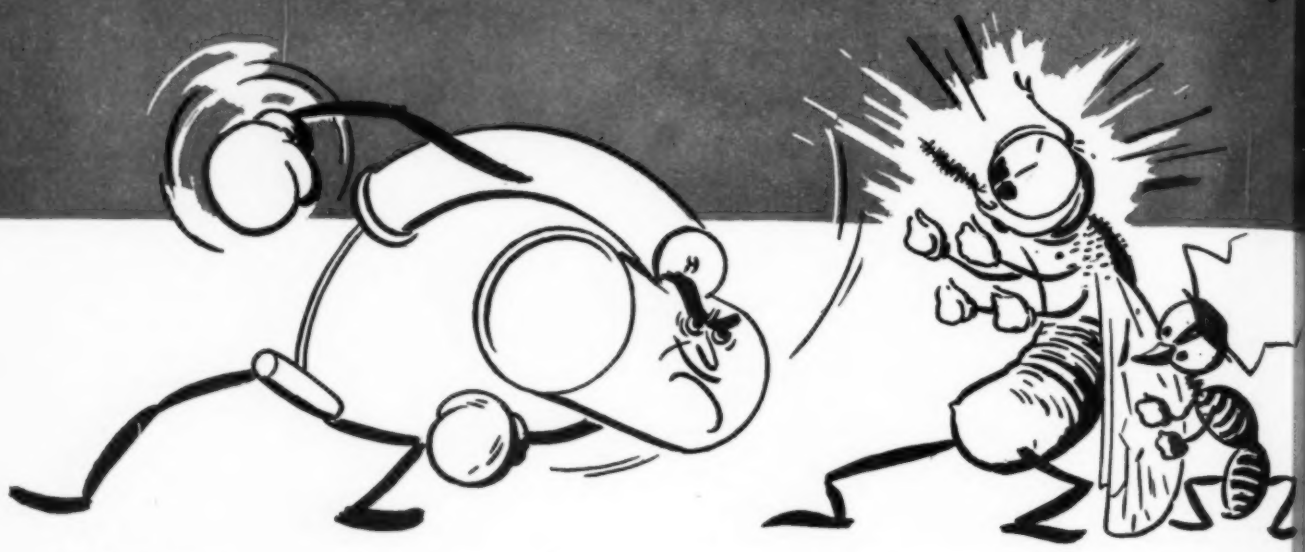

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yielded no evidence that vision had been interferred with.

In the work done with DDT for the army and navy, he remarked, conditions encountered are not comparable to those PCO's would ordinarily meet. So, while the military work is providing a background for civilian applications later, "it does not give us all the answers for civilian use," he declared.

Reporting on results of DDT tests conducted by NPCA's committee in cooperation with the Bureau of Entomology and Plant Quarantine, J. Edwin Sameth of Western Exterminating Co., Newark, N. J., and chairman of the committee, made the following statements:

1. "Indications are that DDT will be among the chemicals used in bedbug control. Tested against prevailing methods, it has been found superior to what the average PCO has used."

2. "The roach control picture is not so clear; 23 tests initiated, 19 completed. Results from six were superior to prevailing methods; 12 were equal, 1 was inferior. Reinfestation will occur but 'we'll get the answer to that next.' "

3. DDT was "not successful in ant control."

4. For dog tick control DDT was "100 per cent superior to anything used in the business before."

5. On carpet beetles, "not enough tests run to give conclusive results." One unit of a heavily infested apartment house was cleared up, leading to the assumption that "where other units in the building are infested one unit could be immunized."

SUBSTITUTING for John A. Rodda of the WPB, Melvin Goldberg reviewed the supply situation for materials commonly required in pest control operations. For arsenicals, rotenone and DDT, he could foresee no change in the current situation. But for pyrethrum he predicted a "liberalization for your industry's use within 60 to 90 days."

"Although you'll get a larger quantity," he said, "you will not get as much as you used before the war and it will be low-test flowers, which the military cannot use."

Reviewing the industry's accident record, C. A. Vincent-Daviss of the DuPont Company, Wilmington, reported 43 fumigation accidents of which 31 resulted in fatalities. Involved in these were 26 companies holding membership in the Association, which, in 1940, had adopted a code of safe fumigation practices. "These 26 companies," he charged, "were supposed to have voluntarily accepted this code. Yet in 12 of the 26 cases, there were no guards as the code requires and in 12 others the guards were careless."

Some form of compulsion, Mr. Vincent-Daviss argued, is necessary for safe fumigation practices and if the industry does not police itself it will be done for it, in ways that will hamper legitimate operations. He proposed revision of the code to include an enforcement provision. This, he admitted, would cause loss of business, because members living up to the code would be forced to reject hazardous jobs. It might also increase costs, because of the additional safeguards the revised code might call for.

"But in the long run," he declared, "the public will learn that membership in this organization means safety and we will gain, just as the medical profession has gained by its high standards of ethics. Insurance rates, also, may come down if association members can show improvements in our accident record." To make his proposal effective the convention authorized a committee to study possibilities for revising the code and report at the 1945 meeting.

Of particular interest in the "Rodent Control" forum was the report by Charles Sparhawk, of the Sparhawk Co., Sparkill, N. Y., on his use of skunk liquid as a rat repellent. Skunks, he explained, are natural enemies of rats and the liquid, diluted one ounce to a gallon, is applied on rat runways, where the rat picks up the odor on his feet. "He carries this odor inside," he continued, "where he becomes an object of suspicion to his own kind. Soon the whole building is permeated with the skunk odor, although it will be imperceptible to humans. And, fearing that their natural enemy is around, the rats will flee the building."

In cold storage warehouses, he asserted, in response to a question, the skunk odor treatment would be especially effective. In winter the skunk's "aroma," he pointed out, is more pungent than in summer and in a cold warehouse the smell would be proportionately stronger because of the low temperatures.

"If the material is used near food, will the food absorb the odor?" he was asked. "I do not think so," replied Mr. Sparhawk. "We've developed an article which in two seconds will eliminate all traces of the smell." The preparation, he also explained, should be applied like paint, with a first coat for sizing and a second, perhaps a third, for more permanent intensive coverage.

Electronic rat traps were also described during the rodent forum and on a show of hands Secretary Buettner found strong support for a proposal he wants to submit to manufacturers that they produce a ready-mixed canned rat bait "in a price range interesting to us."

DURING the forum discussion of "moths and carpet beetles," Dr. Heber C. Donohoe, research entomologist with Wm. Peterman, Inc., Newark, N. J., took occasion to condemn in no uncertain terms "ineffective products now flooding the market" for control of fabric pests. "Even the radio," he said, "is being used to extoll products of little merit." There are, however, he said, a host of promising products under laboratory study. Much work is being done he reported, and "one day there is going to be some good material for your use and for the reputable small packager as well."

Describing work being done on chemical modification of wool fibers, for application during the milling process, to make them inedible for moths, he remarked that this development "won't enable you to make any money." It is, he said, a service little in demand and of decreasing importance to the mill people. He challenged claims that any "moth proofing product" can give "protection for life" to a fabric which is in constant use. For this "misleading" term he suggested use of the words "fabric pest de-

(*Turn to Page* 127)

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By Thos. B. Dorris, Ph. D.
Sprout Waldron Co.

THE production of high quality insecticides has its patriotic as well as its competitive aspects at the present time. While the 1944 supply of active ingredients is probably no less than was available in 1943 (1), it must be borne in mind that the latter left much to be desired. It has been estimated (2) that agricultural losses in the United States due to insect damage in 1943 were over a billion dollars. The same period produced records (3) of such staggering losses as 900,000 tons of cotton seed oil and more than a million bales of cotton. One tangible contribution to the remedy of this situation is the production of better insecticide dust blends.

Insecticide dusts are composed of one or more active ingredients which may be solids or liquids, dispersed in some inert carrier such as clay, bentonite, or talc. For many agents ten per cent is sufficient; more potent ingredients or synergistic combinations may run much lower. Such a combination is pyrethrum with sodium fluoride (or with sulfur). Very low concentrations of one of these ingredients are ineffective, but with both present in this same concentration, an abnormally high toxic result is produced (4).

Most of these dusts are finer than 200 mesh, and recent experimental evidence (5) leads to the conclusion that much finer dusts, well beyond 300 mesh (44 microns), have greatly improved action. In fact, current emphasis is being placed on particles well under 10 microns (6). A single row of 2500 such particles would be less than one inch in length.

The weight of applied toxin may be as little as one millionth of an ounce per square inch of leaf surface (2). A single dust particle of this weight would pass a 40 mesh screen, and perhaps a 100 mesh screen, depending on the identity (and therefore, the density) of the insecticidal agent chosen. A conservative estimate of the number of such particles in a single streak in any of the mixed (but unblended) samples shown in Figure III would be a minimum of 40 and a maximum of well beyond 250. With the ingredient ground to 325 mesh the corresponding number of particles per streak would be more than 12,000. In terms of distribution one small clump one millimeter (0.04″) on edge, deposited on a plant surface might well represent a sufficient number of individual 325 mesh particles to cover 38 to 261 square inches with a theoretical 319 to 46 particles (i.e., one-millionth ounce) per square inch. This illustration embraces particles (or droplets) nearly as light as water and as heavy as lead arsenate.

Actually the worst extreme is probably never encountered in the field if for no other reason than a certain amount of disintegration of small clumps which occurs as the dusts are blown through the spray nozzle. The illustration serves, nevertheless, to drive home the tremendous potentialities of intimate blending which is capable of transforming ordinary insecticide mixtures into products of streak-free uniformity.

In the past six years this organization has studied the intimate blending of a wide variety of industrial powders. Frequently the uniformity requirements were even more exacting than those encountered in producing insecticide dusts. It was first proposed to define blending as the dispersing of one powder (or in some cases, a sprayed liquid) in another with a degree of uniformity beyond that which is obtainable by ordinary batch mixing. This concept generally rules out the applicability of the term where any component is larger than 100 mesh, and certainly where 50 mesh sizes are involved. Where such coarse particles are present, they are usually distinguishable under spatula tests unless some size reduction accompanies the blending operation. There followed a critical consideration of existent facilities by which such blending might be achieved.

Most of these methods are well known. Excellent results may be obtained with ball mills and rod mills. By the use of special spatulating agitators, as well as by increasing the time and speed of agitation, the results of ordinary mixing may be greatly improved. Recourse to two-batch mixing is quite common. A master batch is prepared with all ingredients present in comparable amounts. This is then mixed with the necessary proportion of diluent to give the final desired formula. A buhrstone mill can serve as a very acceptable blender while providing some additional size reduction as well. But all of these methods have found limited application, apparently because of an unhappy combination of such handicaps as insufficient uniformity, low capacity, or high operating cost. Many producers of insecticides, therefore, do not attempt to take their product beyond simple mixing.

The recognition of intimate blending as an operation distinct from conventional mixing is the basis of a practical and economical system for converting two or more powders to a fine, homogeneous product. By reference to Figure I the complete process

RUMORS

It is probably inevitable under present circumstances that the already difficult pyrethrum and rotenone positions should be complicated by rumors of coming relaxation of government controls. Nor is it surprising that many consumers of these materials are drawing some over-optimistic conclusions from these rumors.

Some changes are coming, perhaps are not far away. We cannot attempt to predict what controls may be relaxed, when this may be done, or to what extent relaxation may approach removal. Perhaps, however, we can serve a useful purpose by focusing more attention on the basic question of supply.

Pyrethrum is being produced in large volume, but the amounts available after minimum military requirements are filled cannot be large or adequate and may even be very limited.

Rotenone is available only to an extent sufficient to take care of the most essential 1945 requirements and the maximum will be only half that which the country could easily use.

The facts leave little room for over-optimism, regardless of what may or may not be done about controls.

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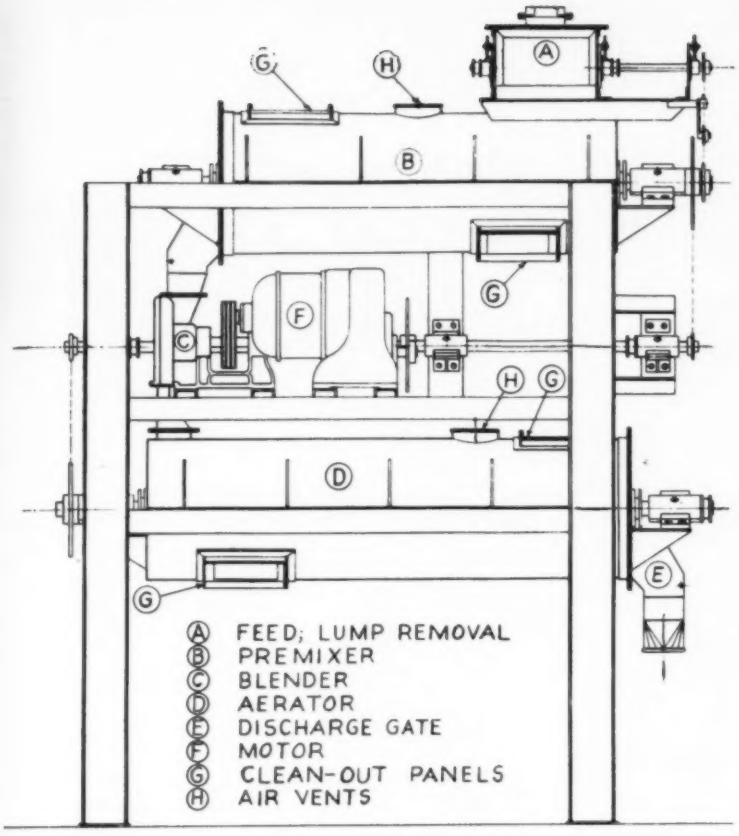

Figure 1. Intimate Blending Assembly. Feed Hopper and Dust Collecting System Not Shown.

may be easily followed. The component powders, carefully proportioned, are fed through a mechanical sifter mounted on the premixer shell. Here any accidental coarse material is eliminated and large compacted clumps of fine particles are reduced. The feed is then mixed sufficiently in the conventional manner to effect a coarse distribution. Many small undistributed clumps remain. Where mixing continued, these clumps would persist indefinitely, buried in masses of material churned about by the agitator and disturbed only if they chanced to be scraped to a very thin layer between an agitator blade and the mixer shell.

The premix is fed, therefore, to a rotary disc blender, the working surfaces of which are illustrated in Figure II. One disc is stationary; the other attains a peripheral speed of nearly 90 miles an hour. In operation, the plates face one another and are adjusted to close setting, permitting the degree of action needed without any waste of power. Since all of the premix passes between these discs from the center to the periphery in a very thin layer, positive blending of each small undistributed clump with its surroundings is assured. For most powders the violent intimate churning effect of the plates shown is sufficient. Where clumps which do not disintegrate readily, or particles too coarse for good blending are encountered, the blender must be equipped with a different type of plate. By such a change a severe rubbing action under pressure (spatulating) may be combined with precision mixing.

IN actual operation it is not feasible to package insecticide dusts at the high rate at which they emerge from the blender, and experience has shown that such fine blends tend to compact markedly upon setting. Settling rates as high as 13 per cent in the first minute (without vibration) have been measured, leaving the material sufficiently rigid to maintain a vertical wall when freshly cut. Flowing qualities are correspondingly reduced.

This problem is solved by the inclusion of an aerator directly connected to the blender which serves to lower the density of the blend to give a free-flowing product readily packaged by manual withdrawal from the dust-tight discharge gate. This unit also serves as a reservoir, giving flexibility to the system and permitting continuous packaging while each oncoming batch is being processed. The aerator is similar to the premixer in operation except that it is usually desirable to provide a larger shell and a more suitable rate of agitation.

The density changes which occur are noteworthy. A feed averaging 50 pounds per cubic foot entering the premixer is expanded considerably and will probably enter the blender at about 35 pounds. The emergent blend will be somewhat heavier (37 lbs.) at the outset, the density increasing as it settles. The aerator counteracts this tendency, however, and the final free-flowing product will range between 32 and 36 pounds per cubic foot, depending on a number of conditions, some of which may be more closely controlled where warranted.

The effectiveness of this procedure on 200 to 300 mesh insecticides is illustrated in Figure III, selected from our experimental files, and has been verified by similar results (7) obtained in full scale production. The comparison between corresponding premix and blend was made by drawing out small mounds of each under a firmly pressed spatula blade. The size of the streaks and spots characterizing the ordinary mixes may be judged by reference to the lines in the background which were actually one centimeter (about ⅜″) apart. With the exception of sample 3184 (insufficient premixing) and one isolated blemish on 6111, all blends are streak-free and virtually unspotted. The long line in 3182 is a furrow; the white spots on 4811 are the background showing

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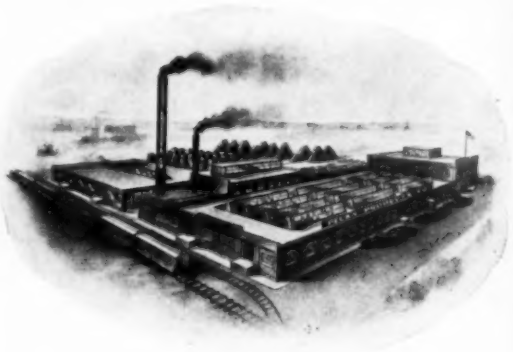

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through bare spots in the thin spatulated layer.

Blue and white components were present in the streaks of 3181, suggesting the presence of copper sulfate and lime; the yellow material distinguishable in 3183 may have been sulfur. More significant than the identity of the undispersed ingredients were the marked changes of shade which accompanied blending—graphic evidence of the thorough dispersal of the colored patches and streaks of the premix to give a blend of outstanding uniformity. In the case of 3181, undistributed white spots resulted in the distinctly lighter pink tone of 3182. The pale pink premix, 4332, was transformed into a deep rose blend (4405) which proved 100 per cent more efficient in field tests.

This particular pair, composed of copper oxide diluted with Pyrax ABB, were compared in a sixty day test. A treatment of 40 pounds per acre was periodically applied to tomato plants for protection against the defoliating disease, Alternaria Solani. At the conclusion of the field experiment, 16 per cent of the foliage was found intact where the ordinary mixture was applied, while the blend gave comparable protection to 33 per cent of the foliage (8).

REFERENCE has been made to the spatula test. This is the most simple test of uniformity, but it is by no means the only test. Small samples may be selected at random and analyzed for variation in percentage of the constituent present in small amounts. Changes in shade are indicative. For fine insecticides, tunnel tests have been devised. The dust is sprayed over a length of tunnel, and the changes of composition and density noted at several successive stations. Where uniformity only is concerned, this method would seem to have certain limitations, since it measures variations in particle size and variations in the density of different ingredients as well as uniformity. Furthermore, the blending effect of the spray nozzle is a complicating factor. The use of actual field tests is also essential in evaluating insecticide dusts, but the interpretation of results must be left to expert hands.

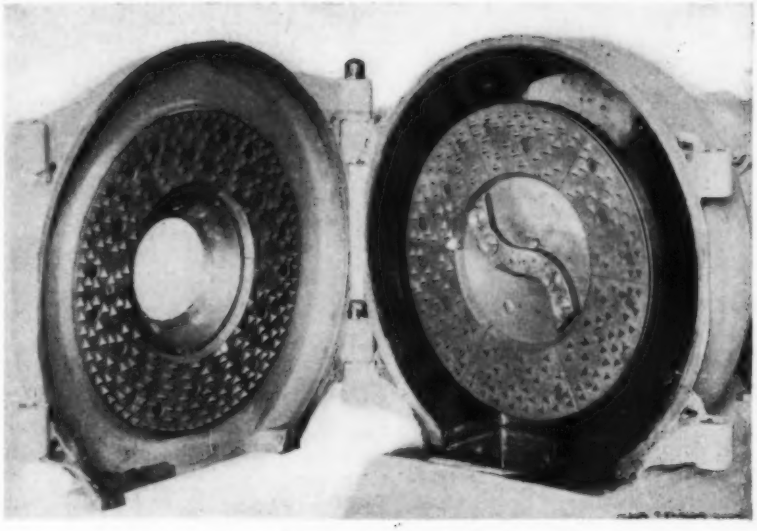

Figure 2. Blending Discs Shell Open for Cleaning.

In comparing methods of blending, none of the foregoing is sufficient for practical purposes in itself. This is especially true where only small differences in product or performance are reported. The two prime factors, economy and capacity, must also be weighed. In fact, where commercial tonnages are involved, they are undoubtedly the most important considerations.

Some idea of these performance factors as related to the process described merits attention. A complete unit designed for 500 pound batches at the rate of three or more per hour can be mounted in a single frame to permit gravity flow through the system from the feed inlet 12 feet high to the discharge gate placed 30″ above the floor to facilitate packaging. This unit requires a floor area 4′ x 10′ only. It is driven by a single 15 H.P. motor, so that power costs as low as 15c to 30c per ton are readily attained. Larger installations are best installed on two floor levels, necessitating the use of automatic conveyors and elevators between units. In spite of this, the same low power costs obtain.

THIS concludes the essential description of apparatus and procedure, but in actual installation and operation many related problems still remain. One of the most pressing is provision for dust-free operation, a major personnel hazard in the production of dust insecticides. Fine particles, especially those under 10 microns, have a marked tendency to become and remain suspended in the atmosphere. In fact this characteristic is the basis of the production of aerosol (9) fogs and mists, one of the newer techniques in the application of dusts. Careful construction of equipment to give dust-tight flow, and proper arrangement of air vents are essential, but offer no relief to employees engaged in proportioned feeding and packaging. The need for proper ventilation cannot be emphasized too strongly, especially at the packaging end, for which a separate hood and fan should be provided.

The changing nature of ingredients as new developments come to the fore must also be considered. The current shortages of rotenone and pyrethrum have focused attention on some of the synthetic liquid insecticide concentrates. If these are to be incorporated into dusts, they should be applied in the premixer by utilizing a fine spray arrangement. Some small clumps will be produced, but these are eliminated in the blender to give a very even distribution of the liquid absorbed on its dry dust carrier. At present DDT is best known as an essential ingredient of louse powder, but

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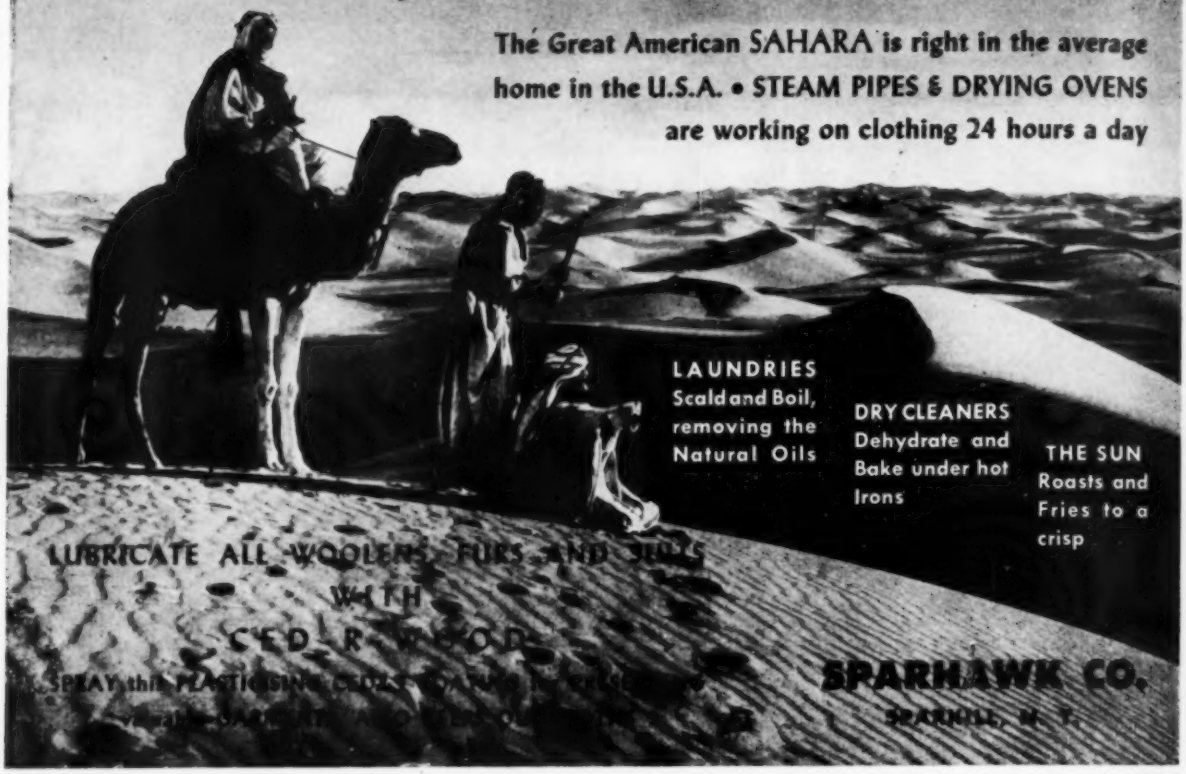

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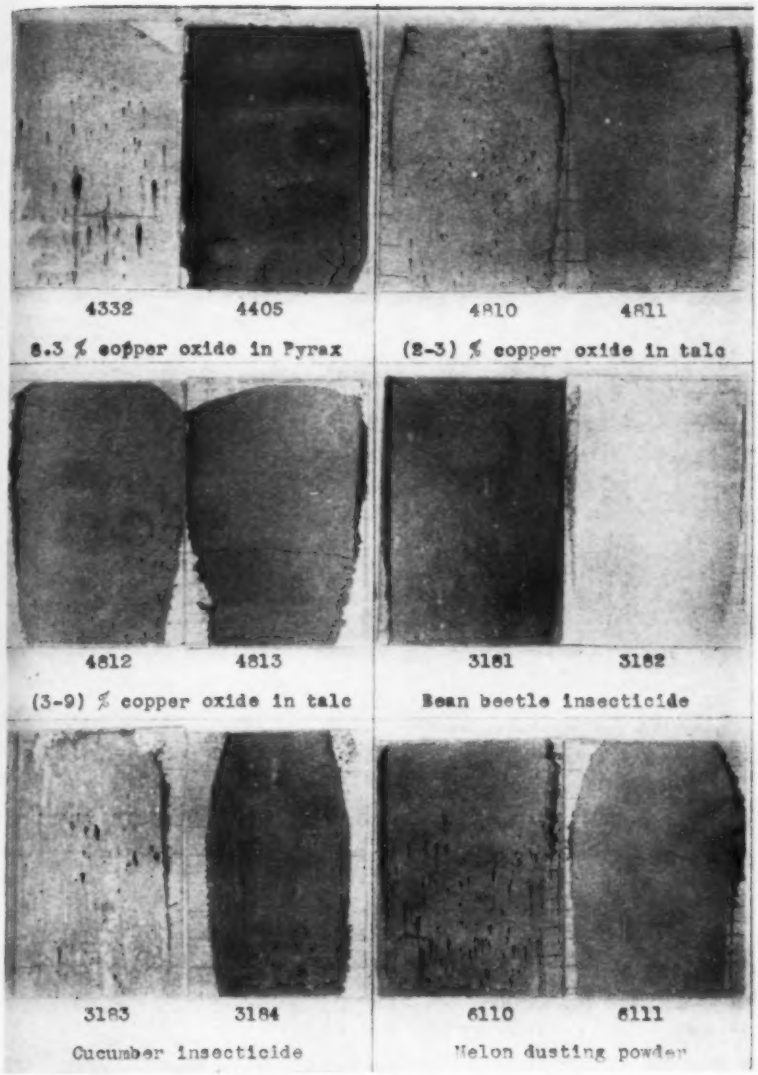

Figure 3. Effect of Blender on Mixed Insecticide Powders.

its great versatility makes it certain to become an important factor in the composition of post-war dust insecticide formulas for many other purposes. With its incorporation will come new problems peculiar to the mechanical milling of low melting solids, for it is a soft waxy material in its pure state.

Reference could be made to a number of other conditions or problems involving operational variations from the basic procedure outlined in this article. Having already encountered many such conditions in meeting individual production technics, there is every reason to believe that the process as described in essential detail herein can be adapted to all fine blends likely to be required by producers of dust insecticides.★★

References Cited

1. Soap and Sanitary Chemicals, *19*, 107 (November 1943).
2. Chemurgic Digest, *3*, 103-4, 109-10 (1944).
3. Soap and Sanitary Chemicals, *20*, 125 (January 1944).
4. Ibid., *20*, 121 (January 1944).
5. Industrial and Engineering Chemistry, *34*, 490 (1942).
6. Chemical and Engineering News, *22*, 803 (1944).
7. Pennsylvania Co-op Review, 8, (April 1944); also, 24 (October 1944); Farm Bureau, Harrisburg, Pa.
8. Private communication, Connecticut State Agricultural Experimental Station, New Haven, Connecticut (1941).
9. Soap and Sanitary Chemicals, *16*, 121 (June 1940).

Insecticidal Aerosols

In ridding barracks, tents and fox holes of the disease and discomfort caused by insect pests, insecticidal aerosols have already justified the stepped-up research efforts that have been devoted to them. Their usefulness in agriculture and in the decontamination of factories, ships and aircraft, without interrupting regular work or service, assures them a sound future.

As a demonstration of practical applications, one large-scale experiment showed that mosquitoes and flies can be cleaned out of a 27 million cubic-foot factory without interrupting the regular work. Next year this method is expected to be tested extensively in other large factories.

Aerosols have a good field for application against greenhouse insects. In closed spaces the aerosol can be retained longer and its greatest effectiveness is realized. Aerosols having a rapid settling rate have been tested on outdoor garden plots. Very good results were obtained, and large-scale application to some field crops appears feasible.

Fungicides are easily applied in aerosol form. Germicides for the sterilization of the air in rooms can also be applied by the liquefied gas method. Considerable work has been done on germicidal aerosols produced by other methods. Many possible applications are seen, some of which will not go beyond the experimental stage, and some of which will undergo commercial development. Practical military use alone has justified the efforts spent so far. Lyle D. Goodhue. *Chem. Industries* 54, 673-5 (1944).

Insecticide

An insecticidal composition is made of rotenone or pyrethrins, or both, with a phenol of the *Anacardiaceae* family as solvent, and petroleum oil as diluent and carrier. Then phenol consists of cashew-nutshell liquid, juice of the Japanese lac plant, or acids extracted from these plants such as anacardic, cardol or urushiol. The mixture is emulsified. M. T. Harvey, to the Harvel Corp. U. S. Patent No. 2,346,256.

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OVER THE TRANSOM

by Preston Peaker

WASHINGTON — Latest news on pyrethrum and rotenone from the Washington front indicates that there is a reasonably good prospect that the War Food Administration may shortly recommend revocation of WFO-46 and WFO-49. Before making any such recommendation, however, they are reported to be seeking assurance that any pyrethrum or rotenone allocated for agriculture will go strictly for specific end uses approved by the WFA. The general plan seems to be to keep existing end use control in effect while reducing the amount of paper work required both by users and government agencies.

* * *

Over the transom comes word that a list made up a few weeks ago of a group of scarce essential materials on which controls will still have to be kept in effect after V-E Day included pyrethrum, but excluded rotenone. With rotenone requirements increasing, however, and no prospect of better supplies until after the defeat of Japan, it was quickly recognized that someone along the line had slipped, as rotenone is definitely a critical material which will require post V-E Day control.

* * *

Insecticide manufacturers desirous of packing in pint cans rather than bottles should address their requests to the Fibre and Metal Section of WPB. It is reported that such permission is being granted so long as the packer does not exceed his total permissible area of plate.

* * *

DDT production has just reached two million pounds per month. At that rate manufacturers have reached their production goal in faster time than the experts have made in arriving at an acceptable new specification for DDT. Hope is still held out, however, that within the course of the next few months a final acceptable draft of the new specification may be worked out so that manufacturers will then know what they have been making for the past year and a half.

* * *

Still up in the air is the question of how much DDT is to go during 1945 for civilian test purposes. A report that 750,000 lbs. might be diverted in this direction for use during the first quarter of 1945 could not be confirmed. It would seem safe to say that "larger" quantities will be made available for "large scale" experimentation during 1945. Probably the exact quantity will not be settled until late December after more of the research data on 1944 findings have been received and studied.

* * *

Look for early appointment of an industry committee representing manufacturers of insecticide sprayers. Personnel is being discussed at the moment and the first meeting may be held in November.

* * *

A new release valve has been developed for the aerosol bomb by Westinghouse. A readily manipulated thumb screw cap, it replaces the former bicycle cap. An automatic cut-off is included which eliminates the necessity of inverting the bomb to stop the flow of aerosol preparatory to recapping. It is reported the Army may shortly adopt the new cap.

* * *

McCormick & Co., Baltimore, are advertising their "B" Brand aerosol bomb for post-war civilian use. Initial advertising copy appeared recently in SatEvePost.

* * *

Lethane versus Thanite patent suit being tried in U. S. District Court, Philadelphia, beginning November 8. Hercules Powder Company and Rohm & Haas Company are taking the thiocyanate insecticide patent matter to court. The trial is expected to take about ten days.

* * *

More soon, we hope, on the new book on Pest Control by Arnold Mallis being published by M-D Co. We hope that copies may be available shortly after the first of the year. Mr. Mallis' book will be as up-to-date as DDT and the aerosol bomb. It will be complete, and finally it will be thoroughly practical. For insecticide manufacturers, PCOs and entomologists.

* * *

Surplus pyrethrum extract! This will probably be a surprise to the insecticide industry, WPB and the pyrethrum processors as well. Nevertheless, it is reported to be a fact, something like $200,000 worth of "surplus" pyrethrum extract having been placed on the surplus property list at the Mare Island Navy Yard, San Francisco, by the Navy Department. The opinion appears to be quite general that, WPB permitting, the Navy will have little or no trouble disposing of this "surplus" material at this time, and even at a small profit.

* * *

The "Is our face red" Department acknowledges the receipt of numerous letters advising that Hysan Products Co., Chicago, are the manufacturers of "Spoo" roach powder. We made the mistake of asking for this bit of information last month after Hysan advertising copy in previous issues had featured the product prominently. No, our inquiry was not a gag,—or text publicity for Hysan's product. Just put it down as a case of "war nerves."

* * *

The United States is currently getting approximately ninety per cent of world rotenone output,—with the United Kingdom getting only ten per cent. This seems to be one case at least where American needs have received sympathetic treatment. Any tendency to handle this scarce and essential critical material loosely, however, could very quickly prompt a less favorable disposition of the world supply.

* * *

A War Food Administration representative advised a recent meeting of the Rotenone Industry Committee in Washington that WFA requirements of rotenone for cattle grub control will increase in 1945. Rotenone allotments for 1945 victory gardens will in all probability have to face a corresponding reduction, he indicated.

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TRADE NEWS . . .

Botwright Joins Vestal Labs

W. E. Botwright, formerly connected with the biochemical laboratory of Dow Chemical Co., Midland, Mich., recently joined Vestal Chemical Laboratories, Inc., St. Louis, as bacteriologist. In his new capacity, Mr. Botwright will devote his efforts to research and development of disinfectants and fungicides.

Pittman Becomes Arrow

Arrow Products Co., formerly Pittman Chemical Co., manufacturers and distributors of "Arrow" sanitary supplies and insecticides, Birmingham, Ala., has recently announced the reorganization of its janitor supply business under the name Arrow Products Co. The company reports that it has sold its insecticide line of "Kill Pest" and its former name, Pittman Chemical Co., Inc. to American Chemical Co.

Allow 'Vad' Trademark Registration

Opposition of McKesson & Robbins, Inc., New York, to the application of Vad Corp., New York, for registration of a trade mark for lipsticks and cleansing creams comprising the word "Vad" has been dismissed by the Examiner of Interferences of the U. S. Patent Office. The dismissal was later affirmed. McKesson & Robbins opposed the Vad application on the grounds that they had previously registered "Vadco" as a trademark for insecticides, liniment, tonic, etc. Registration of the "Vadco" mark was presumed to have expired five years prior to the notice of opposition and there was said to be no certificate of renewal in the record.

Penick Appoints R. P. Neptun

The appointment of Rudolph P. Neptun as field sales manager has just been announced by S. B. Penick & Company, New York, producers of botanical drugs, insecticides and fine chemicals. Well known to the drug industry, Mr. Neptun has been associated with the insecticide, pharmaceutical and manufacturing and wholesale drug fields for more than twenty-five years, most recently with Allaire, Woodward Co.

R. R. NEPTUN

Mr. Neptun will make his headquarters in the New York offices of the company, but will devote much time to visiting customers in cooperation with the regular sales staff.

Entomologists to Meet

The 1944 annual meeting of the American Association of Economic Entomologists will be held at the Hotel New Yorker, New York City on December 13, 14 and 15. Morning sessions will be devoted to discussions of the war activities of the Association, post-war planning, etc. Afternoon meetings will be for presentation of formal papers.

PCO Tests Show DDT Superiority

Eighty-nine per cent of the tests run thus far with DDT in connection with bed bug infestations by experienced pest control operators, working in conjunction with the Bureau of Entomology and Plant Quarantine, U. S. Dept. of Agriculture show DDT to be superior to prevailing methods. These results are contained in a first progress report, just issued by the National Pest Control Association and reporting on findings in their experimental work up to this point. The clear superiority of DDT was shown in each of the three test cases outlined, a high residual toxicity being reported in each instance. The tests are continuing. In the foreword to these preliminary reports it was mentioned that the Bureau had found that formulation has an important relation to the effectiveness of the application of DDT insecticides.

Delta Owner Resumes Business

Ernest E. Reich, who was honorably discharged from the U. S. Army after service with Chemical Warfare Service in the Southwest Pacific, as a Master Sergeant, has recently re-established his business and operates under the name Delta Chemical Laboratory, at 807 Baronne St., New Orleans. The firm manufactures germicides, fungicides, insecticides and cleaners.

S. C. Johnson Appointments

S. C. Johnson & Son, Inc., Racine, Wis., wax manufacturers, have recently announced several changes in personnel. Roy W. Carlson, formerly central divisional manager, has been named sales manager with headquarters at Racine. John H. Hurley, formerly manager of the maintenance paint division, has been appointed manager of the product finishes department. He will direct merchandising activities on behalf of industrial waxes, etc. James W. Barrett, Jr., formerly in charge of the large consumer wax division has been made manager of the maintenance products department. He will direct merchandising of maintenance waxes, water repellents for laundries and dry cleaners, among others. Walter A. Bridgeman has been named manager of field research in the research and development division. Harvey W. Blankenship, formerly advertising manager for Graver Tank & Mfg. Co., Chicago, has been appointed industrial sales promotion manager. The company was the recent recipient of the Army Ordnance Flag for its part in producing gun preservatives and wax compounds.

THE FINEST IN LIQUID SOAPS

☆ *Concentrated Liquid Soap V40*

(Shampoo grade—can be diluted for liquid hand soap)

☆ *15-18% Velvet Liquid Hand Soap*

(Meets Gov't Specifications)

REFRIGERATED — FILTERED — AGED — pH OF 8 — COMPLETELY NEUTRAL — CRYSTAL CLEAR — NEVER ANY SEDIMENT — HIGH LATHERING — FREE RINSING — ODORLESS — NO RANCIDITY — COLORED AND PERFUMED TO ORDER.

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2244 Elston Avenue Chicago, Ill.

G. W. Breuer a Major

G. W. Breuer, vice-president of Breuer Electric Manufacturing Co., Chicago electric insecticide sprayer

MAJOR G. W. BREUER

manufacturers, and son of Adam A. Breuer, founder, was recently appointed a major in the Army and is believed to be the youngest man holding that rank in the Ordnance Division at Aberdeen Proving Grounds, Md. Major Breuer, who is 25 years old, was recently advanced from the rank of Captain. He has been in military service three years. Major Breuer, who recently visited his mother in Glencoe, Ill., plans to resume active direction of the sales and advertising policies of the company on his return to civilian life. He has a brother Adam, Jr., who is now serving with the armed forces somewhere overseas.

New York P.E.A. Meets

At the regular monthly meeting of the Professional Exterminators Association, Neely Turner, of the Connecticut Agricultural Experiment Station, New Haven, spoke on "Termites and Their Control." The meeting was held Oct. 9, at the Hotel Commodore.

Changes Department Name

Rohm & Haas Co., Philadelphia, have announced a new name for their insecticide and fungicide division, which will now be known as the Agricultural and Sanitary Chemicals Department, in line with the department's broadened scope of activities. Under the direction of D. F. Murphy, this division handles the sales not only of the company's insecticide concentrates and fungicides, as heretofore, but also of its disinfectants and germicides as well as a group of synthetic surface-active compounds for industrial use.

Lambert Acquires Harrower

Lambert Co., parent company of Lambert Pharmacal Co., St. Louis, recently acquired Harrower Laboratory, Inc., Glendale, Calif., producer of pharmaceutical specialties in the field of indocrinology.

Aerosol, Dispenser Story Told

The story of the packaging, and some of the early history, of the Aerosol insecticide are told in a fully illustrated article, "Bug Bomb," in the October, 1944 issue of *Modern Packaging* magazine. Scenes of the "bomb" in action in the home, in the greenhouse and in the field, in various stages of manufacture and filling, as well as a close-up of the refillable dispenser are shown in this article.

Cole Labs' War Activities

Cole Laboratories, Long Island City, N. Y. manufacturers of soaps and disinfectant for the wholesale maintenance supply fields, recently announced that fire extinguisher fluid which it manufactures is used in its entirety at present by the armed forces of the United States. Retort Pharmaceutical Co., a division of Cole Laboratories, which is specializing in the manufacture of products for the pharmaceutical trade, recently received the Army-Navy "E" award.

Burroughs Wellcome Head

Guy S. Dunbar has been elected to succeed Thomas Nevin, retired, as president and general manager of Burroughs Wellcome & Co., (U.S.A.) New York, insect repellent and pharmaceutical manufacturers. Mr. Nevin retired under the age limit after 33 years with the company. R. C. Ralphs, treasurer, and W. F. Weber, secretary, have been elected vice-presidents.

Penick Presents Portraits

Harold Noble, general manager of the Insecticide Department of S. B. Penick & Co., New York, was

HAROLD NOBLE

one of five executives honored by the presentation of a portrait of himself, signalizing more than 25 years of service, at a company dinner at the Astor Hotel, New York, Oct. 11. The occasion, at which some 200 executives and office employees were present, climaxed a three day sales meeting and also marked the 30th anniversary of the founding of the company. Other members of the firm who received their portraits, in order of their length of service, were: T. B. Dysart, associated with the company 30 years and now manager of the Asheville, N. C., branch; E. L. Schneider, personnel manager; C. W. Speed, director and treasurer and Miss M. E. T. Corr, director and vice-president in charge of import purchases. The paintings were done by Edmund Magrath.

F. X. Hogan Dies Suddenly

Frank X. Hogan, vice-president and general sales manager of Container Co., a division of Continental Can Co., New York, died suddenly while on vacation in Monroe, N. Y., Sept. 30. He was 55 years old. Mr. Hogan joined Container Co. in 1930 as eastern sales manager, after having been connected with Robert Gair Co., New York, and A. George Schulz Co., Milwaukee.

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BOS-CEM SELF POLISHING FLOOR WAX

- Dries To High Lustre
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64 East Brookline Street
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Makers of: Gym Cleaner, Pine Scrub Soaps, Liquid Hand Soaps, Metal Polishes, Furniture Polishes, Paste Waxes, Powdered Waxes, Disinfectants, Special Cleaners.

YOUR INSECTICIDE...
saturates the air to the furthest corners when Penn-Drake Insecti-Sol is used as a base for the insecticides

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Insecti-Sol penetrates deeper—actually saturates the air, yet provides perfect, stain-free safety for clothing, rugs, drapes, curtains, etc., by evaporating entirely upon completion of the toxic action.

Full-floating, crystal clear Insecti-Sol is the perfect base for makers of Pyrethrum extract; synthetic bases for insecticides; fly and insect sprays; fumigators; exterminators.

Write Dept. 108 today for valuable information regarding Insecti-Sol and Penn-Drake Odor-Free Naphtha—the perfect base for Mothicide preparations.

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N.A.I.D.M. Meets in New York Dec. 4-5—Announce Program

JOHN POWELL
Program Chairman

CHARLES OPITZ
In Charge of Dinner

THE complete, tentative program of the 31st annual meeting of the National Association of Insecticide and Disinfectant Manufacturers, to be held Monday and Tuesday, Dec. 4 and 5, at the Roosevelt Hotel, New York, has just been released by H. W. Hamilton, of Koppers Co., Kearny, N. J., secretary. Highlights of the program will be a symposium covering the Washington situation, two addresses on DDT, a discussion of postwar packaging and a talk on the "Revision of the Insecticide Act of 1910." The two papers on DDT will deal with its toxicity and the latest developments relating to that new insecticide. The Washington symposium will feature speakers representing the W. P. B., O.P.A., and the N.A.I.D.M.'s Washington office. This year's program chairman is John Powell, of John Powell & Co., New York, who replaces Melvin Fuld, of Fuld Bros., Baltimore, who was forced to withdraw because of illness. Mr. Powell served as program chairman last year. John Opitz, of John Opitz, Inc., of Long Island City, N. Y., will be in charge of the annual dinner, Tuesday evening, Dec. 5.

The complete program, subject to change between this writing and Dec. 4, as released Nov. 1, by the N.A.I.D.M., follows:

MONDAY, A.M.—DEC. 4TH

Henry A. Nelson, *Presiding*

9:00 A.M. Registration.

10:00 A.M. Meeting called to order.

Address of President—Henry A. Nelson, Chemical Supply Co.

Report of Secretary—H. W. Hamilton, Koppers Co.—White Tar Division.

Appointment of Committees.

Election of Nominating Committee.

Roll call and introduction of guests.

"Changing Concepts of Sanitation within Industry"—Mohe H. Solworth, Sanitation Consultant, Joseph E. Seagram & Sons, Inc., Louisville, Ky.

Report of Legislative Committee—Chmn., W. J. Zick, Stanco, Inc.

Report of Disinfectant Scientific Committee — Chairman, C. L. Weirich, The C. B. Dolge Co.

12:30 P.M. Group luncheon.

MONDAY, P.M.—DEC. 4TH

N. J. Gothard, *Presiding*

2:00 P.M. Meeting called to order.

"Toxicology of DDT"—Dr. Paul A. Neal, Senior Surgeon, Chief, Industrial Hygiene Research Laboratory, U. S. Public Health Service, Bethesda, Md.

"DDT Up to Date"—J. A. Jenemann, Manager, Sales Development, Grasselli Chemicals Department —E. I. duPont de Nemours & Co.

Report of Insecticide Scientific Committee—Chairman, F. C. Nelson, Stanco, Inc.

"A-B-C's in the Formulation of Phenolic Disinfectants"—Dr. Paul A. Wolf, Biochemical Research Laboratories, Dow Chemical Company.

Report of Sanitary Specialties Marketing Committee — Chairman, L. B. Schwarcz, Ampion Corporation.

Report of Executive Committee — Chairman, Ira P. MacNair, MacNair-Dorland Co.

4:30 P.M. Adjournment.

TUESDAY, A.M.—DEC. 5TH

Gordon M. Baird, *Presiding*

9:30 A.M. Meeting called to order.

Report of nominating committee.

Symposium—"The Washington Picture."

Speakers will be Chiefs of Sections, Administrators of Orders, from the War Production Board and Office of Price Administration, and N.A.I.D.M.'s Washington Representative.

"Packaging—A Stepchild of Advertising"—Donald Deskey, Industrial Designer, Donald Deskey Associates, New York.

"Revision of Insecticide Act of 1910" — Dr. C. C. McDonnell, Chief, Insecticide Div. Livestock and Meats Branch, War Food Administration, Office of Distribution, Washington, D. C.

Address: Brigadier General Joseph F. Battley, Deputy Chief of Staff, For Services Commands, U. S. Army Service Forces.

Report of Sanitary Specialties Scientific Committee—A. B. Pabst, Socony-Vacuum Oil Co.

"Research on Walkway Surfaces" —J. A. Dickinson, Chief Section of Safety Codes, National Bureau of Standards, U. S. Department of Commerce, Washington, D. C.

12:30 P.M. Group luncheon.

TUESDAY, P.M.—DEC. 5TH

Henry A. Nelson, *Presiding*

2:30 P.M. Meeting called to order.

"Synthetic and Semi-synthetic Nutrient Media for Use in Testing Disinfectants and Antiseptics"—Dr. E. G. Klarmann, Lehn & Fink Products Corp.

Report of Exhibit Committee — Chairman, A. W. Morrison, Socony-Vacuum Oil Co.

"Our Far-Flung Battlefronts" — Major George Fielding Eliot, Noted Military Commentator "New York Herald Tribune."

Report of Special Sprayer Committee—Chairman, F. C. Nelson, Stanco, Inc.

"Repellents and Their Uses in the Armed Forces"—Dr. W. E. Dove, Bureau of Entomology and Plant Quarantine, Agricultural Research Administration, Washington, D. C.

Report of Resolutions Committee.

Election of Officers.

Unfinished Business.

4:30 P.M. Final Adjournment.

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NO insecticide, no matter how powerful, can do its best work unless it makes contact. So be sure the Sprayer you use for spraying your insecticides has plenty of power and capacity to do the job right. You can be certain of such power and effectiveness with the ADAM A. BREUER'S ELECTRIC (motorized) INSECTICIDE SPRAYER. Shoots insecticides up to 20'. Penetrates crevices, cracks, hard-to-reach places. Four models, ¼ to 1 H.P. *Write, giving details of your problems and requirements.*

We do not sell insecticides. Our business is the manufacture of Sprayers. (Patented in U. S. A. and foreign countries.)

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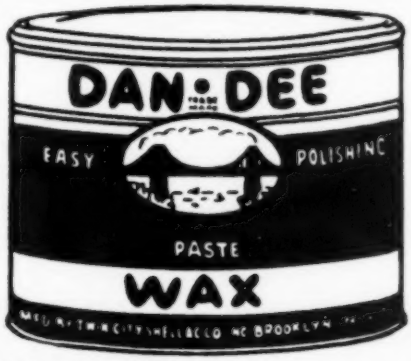

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Lane Joins Standard Synthetics

James Lane, formerly of Burroughs Wellcome Co., New York, has recently joined Standard Synthetics, Inc., New York essential oil and aromatic chemical company, in an executive capacity. He will act as assistant to Edward Remus, president and J. L. Hindle, technical director, in preparation for expansion of Standard Synthetics' postwar, world wide operations.

New Peruvian Insecticide

A new Peruvian insecticide, known as "Insecticida Babbini S.A.," is reported in the British trade journal: *Oil and Colour Trades Journal,* which bases its story on a Reuters dispatch. The new insecticide, a powder, the journal says, is being produced at the rate of a million pounds a year. The planned output is said to be four million pounds annually to meet the country's own requirements. The product is intended for use against pests attacking cotton plants. It is reported to be composed of chili, pepper, sabadilla, arsenic and quicklime, of which all but sabadilla are produced in Peru. Higher in price but designed to replace calcium arsenate and calcium-arsenate-paris-green mixtures, it is claimed to kill not only worms but aphids that attack cotton plants. The insecticide can be produced in liquid form, the producers say, with the addition of alcohol, which is available locally.

N.P.C.A. MEETS

(*From Page* 109)

terrent." It would, he admitted be "terrific" to put that phrase on a label. "But what we need," he said, "is a short, catchy, descriptive word for this type of product."

Fred J. Bowers, president of the New Jersey Pest Control Association and head of Bowco Labs., Rahway, N. J., in a discussion of "Quirks of Carpet Beetle Fumigation," declared that of all fumigation operations, this is the most difficult.

He outlined many of the causes for failure and suggested remedial measures for overcoming difficulties.

A summary of the year's work of NPCA's technical committee on moth and carpet beetle control, participated in by J. Edwin Sameth, chairman, John K. Medoff of Hudson Exterminating Co., West New York, N. J., and Dr. Arthur L. Brody, Pioneer Exterminating Co., New York City, was followed with close attention for almost two hours. Over 600 hours of work were devoted to evaluation of seven materials, including four proprietary products. In summary, all of them did mothproof the fabric "to some degree." Sodium arsenite gave the poorest protection and one proprietary product was "among the poorest." Three others were "about equal" in their protective characteristics, while "Dow K 965," a product not yet on the market, together with DDT, "seemed to be the best moth proofing agents, at least for the present."

SPEAKING at Tueday's luncheon session, Major Joel Connelley, chief assistant to the president of the Chicago Board of Health, asserted that a big future problem will be to prevent insect-borne tropical diseases from gaining a foothold in this country. In this endeavor the importance of the pest control operator will be recognized more than in the past, he said. He stressed the importance of education in sanitary measures to protect the public, a program in which the PCO must play a big part. Maj. Connelley substituted for Chicago's Health Commissioner Dr. Herman N. Bundesen.

Exploring "New Fields for the PCO," Dr. George C. Decker, chief entomologist, Illinois State Natural History Survey, Urbana, Ill., reported on a survey of services rendered by Illinois operators which indicate that very few of them are performing all services in the five commonly recognized categories of the profession. Looking into possibilities for developing entirely new business, he suggested formation of "spray services" to supply the small property owner with pest control work on fruit trees, shade trees, ornamentals and lawns. The airplane, also, of which there will be many available in the post-war era, might, he said, be used to develop a spraying and dusting service for orchards, much as this service is performed for field crops in the South.

He foresaw continued development of the trend which has brought about the appearance of the "consulting entomologist." "Already," he said, "there is evidence of a demand for such service and a willingness to pay for it. The opportunity is there and will grow." Men returning from military service, he further pointed out, will remember the sanitary engineering work done in their behalf on the battlefronts and will demand similar control of mosquitoes and insect disease carriers at home. "Some one will have to perform that service," he said, "if the pest control operator is prepared, he should get most of the business."

In another examination of the future outlook for the PCO, Dr. Guy F. MacLeod, chemicals division, War Food Administration, Washington, D. C., found numerous reasons for viewing the future with optimism. "These are the facts," he said: "1. The publicity given to the importance of protection from vermin has focused public attention as never before on the field of our interest. 2. The old pests have increased under enforced relaxation of control measures. 3. New pests have, and will arrive with strategic materials and the increased tempo, as well as volume of air transport. 4. Technical research has moved faster and farther in three years of war than it would in ten normal peace-time years. 5. Enforced public savings have provided folks with the buying power needed to achieve their desires for comfort and security."

"The job is there to do," he said; "people recognize the need for adequate pest control more than ever; they have money to pay for it; and the pest control operator will have new and remarkable tools to do his job with.

"What are you going to do about it?" he asked. "Go ahead on a sound, long-time basis, building a profession, or jump in, grab what you can in a racket and set the profession back 50 years? It lies in your hands . . . If you, as individuals, meet this question honorably and conscientiously . . . we need have no fear for the profession."

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ROTENONE goes to WAR!

Recognizing its strategic value in the control of certain insects and pests, the use of Rotenone has been restricted to the needs of the Armed Forces, the protection of a limited number of vital agricultural crops, and the control of warble fly on cattle.

Many peace-time users of Rotenone for other purposes have had to readjust their plans to get along without Rotenone, and have done this willingly, appreciating that Rotenone has an important job to do in the winning of the war.

Those who need Rotenone for the specific purposes for which it is now reserved will be glad to know that we have still available supplies of **ROTENONE** and **ROTENONE RESINS** and from time to time expect to have **ROTENONE POWDERS.**

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Specialists In Rotenone Roots and Rotenone Products
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Announcement . . .

E. G. Thomssen is pleased to announce that he is now available as a consultant to manufacturers and others particularly in the fields of insecticides, disinfectants, floor waxes, soaps and allied products—Special attention to government specification products. Plant lay-out, equipment design, product formulation and costs, and general production problems can be undertaken backed by twenty-five years of both large and small scale practical plant experience.

E. G. THOMSSEN, Ph.D.
306 CENTER STREET, WINONA, MINN.

DAIRY CLEANERS

(*Continued from Page 38*)

"In the discussion of a proper amount of cleaner it is suggested that the proper amount be determined for a definite amount of water and that amount weighed into paper sacks so that one sack in say 100 gallons water at 115 degrees F. makes the proper solution. It is very important, too, that the material be dissolved completely, as serious harm may result from highly concentrated lumps of cleaner lying on a tinned surface."

Boxcar Fumigator

Development of insect or animal infestation in a carload of foodstuffs or other infestable products can be prevented before shipment by fumigation with methyl bromide. When the car has been loaded, a length of special tubing is laid on top of the shipment with the small holes in the clear. The other end of the tubing should extend outside the car to the applicator. After the car doors are closed tight, the can of methyl bromide is punctured automatically when it is clamped in the applicator, allowing the gas, which is heavier than air, to flow outward and downward through the shipment. The usual treatment is a one-pound can to the car. Similar equipment can be used in vault fumigation.

Sabadilla Lice Tests Favorable

Sabadilla, said to be an old standby of New York dairymen in controlling lice on cattle, has been investigated and found to approach but "not quite reach rotenone in effectiveness," according to an article by John G. Matthysse, writing in *Farm Research*, a quarterly bulletin of the New York State Agricultural Experiment Station at Geneva and the Cornell University Agricultural Experiment Station at Ithaca. In investigating insecticides to replace war-scarce rotenone for controlling cattle lice, other products were found to give indifferent results, while sabadilla was found to be nearly as effective as rotenone, the author says. The article points out that "for many years dairymen have been buying coarsely ground sabadilla seed at drug stores and applying it to their stock with fairly good results. To test sabadilla accurately, samples were finely ground in a rotary hammer mill with pyrophyllite and diluted to five per cent and 10 per cent with sulfur. These dusts, and comparison dusts of rotenone and other insecticides were then applied to lousy cattle. A number of tests were conducted so that each dust was tested for efficiency against all species of lice, and sabadilla approached but did not quite reach rotenone in effectiveness," the article states.

Synergists to Insecticides

Insecticides effective in aerosol form are prepared by mixing 99.9-90 parts of ortho-dichlorobenzene and 0.1-10 parts of lauric, oleic or myristic acid, or of diglycol laurate, propylene glycol oleate, propylene glycol laurate, sorbitol laurate, monoglycol laurate, lauryl sulfate, sulfonated naphthalene, or spermaceti. In place of orthodi-

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Does your product require a *certified color* under the new law? Let us advise you, and supply you with exactly the right color for the right purpose!

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PHOSPHOROUS PASTE
FOR ROACHES and RATS
SINCE 1874

J-O Phosphorous Paste is so compounded as to eliminate the hazard of fire and possesses advantageous qualities peculiar to itself. A properly made **Phosphorous Paste** such as **J-O** is absolutely safe to use. It cannot burn or set fire to other substances.

Phosphorous, however, remains basic in the compound because it is the most toxic chemical used in pest exterminating, being more toxic than arsenic, strychnine or thalium. Approximately one-tenth of a grain will kill a rat. Phosphorous is a slow poison, taking from 6 to 18 hours to kill. Due to its slow but positive action, the rat succumbs to this poison. He becomes very uncomfortable and, seeking fresh air and water, in most cases, leaves the premises and dies in the open.

For all species of roaches, this product is **UNEXCELLED.**

JOHN OPITZ, INC.
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Manufacturers of Exterminating Products Since 1874

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THE MARK OF QUALITY

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We specialize in originating products to meet unusual perfume requirements for the soap and sanitary chemical industry.

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We announce development of new type soap colors

PYLAKLORS

They have good fastness to alkali, light, tin, ageing.

The following shades are already available:

Bright Green	Dark Brown
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True Blue	Violet

It will pay you to send for testing samples.

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chlorobenzene may be used 3-chloroacenaphthene or 2-chlorofluorene with spermaceti as synergist. Wm. N. Sullivan and L. D. Goodhue, to the Secretary of Agriculture. U. S. Patent No. 2,343,891-909.

Pyrethrin Activation

The constituent of sesame oil chiefly responsible for activation of pyrethrins is sesamin. There may also be present a complex of secondary factors which, according to its composition, can increase or decrease the effect of the pyrethrins. E. A. Parkin and A. A. Green. Nature 154, 16-17 (1944).

Pyrethrolone

Pyrethrolone from pyrethrum flowers is a mixture of at least 4 structurally different compounds, one of which has the conjugated system of double bonds while another contains a side chain terminating with a C:CHMe group. F. B. LaForge and W. F. Barthel. J. Org. Chem. 9, 242-9 (1944).

Rat Control in Britain

While the methods of control used are not new, careful application of them made possible a successful rodent exterminating campaign in Britain. An extremely large infestation, that of the 3,000 miles of London sewers, is reported to have been effectively treated under the direction of the British Ministry of Food.

Bases used for the poison baits were as follows.

1. Damp sausage rusk—equal parts by weight of dry rusk and water.
2. Sugar meal—9 parts by weight flour, 1 part sugar.
3. Bread mash—a porridge-like mixture of stale bread and about twice its weight of water.
4. Soaked wheat—wheat soaked for 24 hours in water.

Poisons

Zinc phosphide was used in a fairly crude form containing maximum impurities of 8 per cent, mainly zinc and the oxide. Less than 50 per cent passed a 120 mesh sieve. Its black color makes thoroughness of mixing with bait easy. In contact with acid solution zinc phosphide liberates phosphine, a poisonous gas. If a great deal of zinc phosphide bait is being made up, there should be thorough ventilation.

Arsenious oxide must be finely divided. The particles are preferably 0.003-0.016 mm. in diameter and about 97.5 per cent pure. The average lethal dose of such particles is 119 mg. per kilogram. A dye in the oxide aids in thoroughness of mixing.

Barium carbonate is generally used in the form of pulverized witherite, which contains 95-97 per cent $BaCO_3$. The average lethal dose is 750 mg. per kilogram and it should only be used with bread mash. Rats eat this base in larger amounts than they do the others. Consequently they ingest a lethal dose when the barium carbonate is in the proportion of 20 per cent. The material is gray.

Red squill powder should be tested on experimental rats, as this material is variable in toxicity. Squill has to be ingested in large amounts.

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LATE?

STATEMENT OF OWNERSHIP

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, and March 3, 1933, of Soap & Sanitary Chemicals, published monthly at New York, N. Y., for October 1, 1944.

State of New York, County of New York.

Before me, a Notary Public in and for the State and County aforesaid personally appeared Ira P. MacNair, who, having been duly sworn according to law, deposes and says that he is the Editor of Soap & Sanitary Chemicals and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are: Publisher, MacNair-Dorland Company, Inc., 254 W. 31st St., N. Y. C.; Editor, Ira P. MacNair, 254 W. 31st St., N. Y. C.; Managing Editor, Wayne E. Dorland; Business Manager, Grant A. Dorland, 254 W. 31st St., N. Y. C.

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5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the months preceding the date shown above is ——. (This information is required from daily publications only.)

IRA P. MACNAIR, Editor.

Sworn to and subscribed before me this 3rd day of October, 1944.

HARRIET LEVINE, Notary Public.

Bronx County Clerk's No. 145. New York County Clerk's No. 812.

Commission Expires March 30, 1945.

The basic principle of all control methods is that an infestation should be completely wiped out in a few weeks. The methods outlined are the only ones which consistently give a 90-95 per cent kill under the widest range of conditions.

In order to avoid rats becoming prejudiced by a sublethal dose, they should be prebaited with unpoisoned bait for four nights. They will then eat freely of the poison bait when it is laid down in the same place. A test of the success of a treatment may be made by laying a postbait. Two or three days after poisoning, a different bait base without poison is put down at the points where the poison bait was previously laid. The take of this will indicate the degree of infestation which remains. The approximate average daily intake by one common rat is: Damp sausage rusk 2 ounces; bread mash 3 ounces; sugar meal 1 ounce; dry wheat 1 ounce; soaked wheat 2 ounces. Twenty to 30 rats sometimes feed at one baiting point.

Use of a small amount of prebait does not reduce the amount of poison bait eventually taken. When really large infestations are treated, it is often desirable to follow up the main poison treatment with a second on a smaller scale. In the second treatment, in order to overcome the possibility that a few prejudiced rats remain, both bait base and poison should be changed. Pre-bait need only be laid where there has been a take of the post bait put down after the first treatment. The post bait can be used as the first of the pre-baitings of the second treatment. *Pharm. J.* 152, 222-3 (1944).

◆

Mothproofing Composition

A mothproofing composition suitable for treating textile materials consists of a lower alkanolamine fluosilicate such as mixed ethanolamine fluosilicates compounded with about 1-3 times its weight of magnesium fluosilicate, suitably with the use of water. H. I. Jones, to Hizone Products. U. S. Patent No. 2,340,328.

◆

Control of Spiders

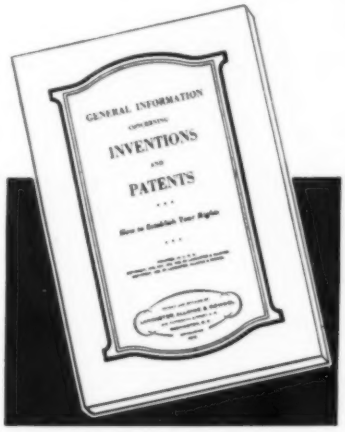
A product suitable for use in dusts or sprays for combatting the red spider and other pests, is prepared by heating a mass of sulfur to a temperature above its melting point but below 200° C., and stirring into the molten sulfur about 1 per cent of rotenone. The solidified mixture is cooled and powdered. W. C. Hellings and F. B. McLane, to Stauffer Chemical Co. U. S. Patent No. 2,350,328.

RED SQUILL

(*From Page* 102)

will produce a high rate of efficiency. The reports we receive are encouraging. While the fortified material must, of necessity, cost more, our experience in rodent control work has revealed the fact that if effective results are obtained the users do not object to the price, as long as it is reasonable and just.

I am happy to conclude by saying that supplies of the raw squill chips and powder are now coming into the United States in such volume that we have high hopes that the public will be able to obtain quantities sufficient for their needs. ★★



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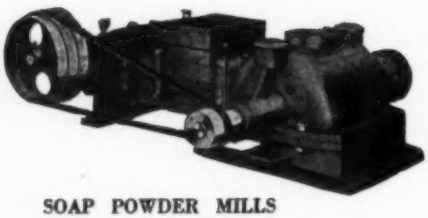

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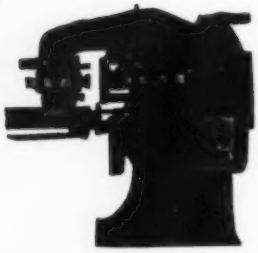

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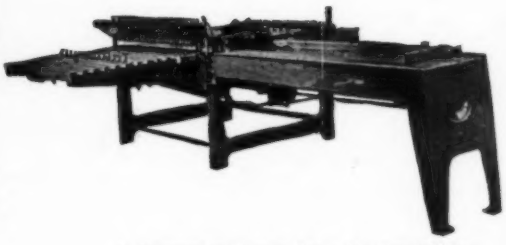

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Wanted by middle-sized company expert toilet soap maker with technical knowledge and experience for making liquid shampoo. Good starting salary. Excellent facilities and good opportunity for advancement. Plant located in large city with good living conditions. All replies confidential. Address Box No. 807, care *Soap & Sanitary Chemicals.*

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Southern P.C.O. Meeting Dec. 4-6

The Fifth Annual Southern Pest Control Operators Conference will be held at Louisiana State University, Baton Rouge, Dec. 4, 5 and 6, according to an announcement issued late last month by the National Pest Control Association. Professor O. W. Rosewall, of the Department of Zoology and Entomology, L. S. U., is in charge of the program, which will include such subjects as: fumigation, rat control, common household or structural insects and sanitation.

Ungerer Boston Rep. Visits N. Y.

George MacDonald, sales representative of the Boston office of Ungerer & Co., New York essential oil company, visited New York recently on a short vacation with Mrs. MacDonald. While in New York, he visited the firm's main office.

Three New Continental Plants

Acquisition of the assets and business of Owens-Illinois Can Co., a subsidiary of Owens-Illinois Glass Co., was approved by the directors of Continental Can Co., New York, it was announced last month. By acquiring the three Owens-Illinois Can Co. plants in Baltimore, McKees Rocks, Pa., and Clearing, Ill., the number of Continental Can Co. plants is brought to 66. In addition, Continental has two plastic manufacturing plants, three crown cap plants, 11 paper container plants and six machinery manufacturing and servicing plants.

ARMY HONORS McCORMICK

(*From Page* 100)

our troops in the South Pacific and elsewhere. For the duration of the war Stanco has waived all patent royalties so that dimethyl phthalate can be made available for military use in the greatest possible quantities. So vital have repellents been considered in jungle warfare, incidentally, that they are now carried as one of six essential items in all U. S. Marine Corps emergency kits.

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SUPPLIES of the 1944 Official Test Insecticide for evaluating insect sprays by the Official Peet-Grady Method are available from the office of this Association. The 1944 O.T.I. is priced at $5.00 per dozen six-ounce bottles, plus shipping costs, to members of this Association. To others, there is an additional service charge of $1.00 per dozen. Single bottles are $1.00 each. Check with order is required.

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Every effort is made to keep this index free of errors, but no responsibility is assumed for any omissions.

"If yo is tryin' to tickle dat critter to deff, Cuthbert, hit 'im in de funny bone!"

Good shot, but...

SUCCESSFUL elephant hunting is best done with an elephant gun . . . you can't do much against elephants with bird shot . . . which is very much like advertising . . . in short, a publication which specializes in covering one field can usually do a better job for both its readers and its advertisers . . . can concentrate its attention to greater advantage on the problems of that field . . . can hold the interest of all its readers with every issue . . . and of particular importance to its advertisers, can usually show a high subscription renewal rate . . .

When it comes to the field of soap products, detergents, insecticides and allied chemical sanitation products, if you would advertise in the one publication which has specialized in covering this field for the past twenty years, we suggest looking into

SOAP *and Sanitary Chemicals*

254 WEST 31st STREET NEW YORK 1

Member Audit Bureau of Circulations

Tale Ends

CLOSE to two-and-a-half billion pounds of fats, grease and oils will be required for American soap manufacture for the fiscal year ending June 30, 1945 according to WFA, in order to supply domestic soap needs as well as those of Europe. This would indicate that something like a billion-and-a-half pounds of American soap may go abroad during the fiscal year.

* * *

Whiskey shipped as "liquid soap" into Idaho recently was confiscated by U. S. government agents! It arrived in trunks marked "liquid soap," says the A.P. What next will they be shipping soap in?

* * *

If all the new products which we have heard talked about in recent months come on the market after the war, we wonder who will buy and use them. There hardly seem to be enough people.

* * *

"Will pest control operators be able to stay in business after the war?" asked one of the audience at the recent meeting of the National Pest Control Association in Chicago. He was obviously thinking of new developments such as DDT which because of the increased efficiency which they will lend to the householder's fight against insects might, he feared, make the services of a professional operator unnecessary. He was promptly assured by one of the speakers that if the householder uses the newer insecticide materials as inefficiently and inaccurately as he has always used materials previously available, there will still be a wide sphere of operations for the professional PCO.

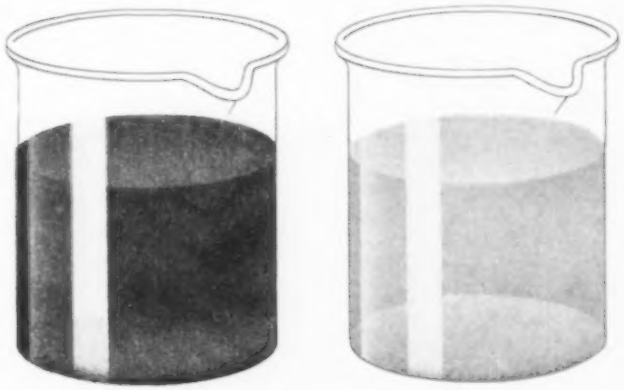
* * *

Again we must remind our friends that with restricted paper supplies and enforced limited press runs, there is little assurance that we can supply back issues of *Soap & Sanitary Chemicals*. Watch your subscription, do not let it lapse,—when you receive a subscription renewal bill, send in your check promptly so that you do not forget.

Now you can perfume most liquid soaps—

— without expensive filtering or decanting!

Ordinary perfume odors in liquid soap



Aromatic's Floral Odors in liquid soap

Aromatic's Floral Odors do not cloud the soap

Think of the time and money you've spent filtering and decanting your liquid soaps after they've been perfumed. Now you can save all this effort and expense by using Aromatic's Floral Soap Odors, for these perfumes *remain clear* in most liquid soaps and require no filtering or decanting. We shall be glad to send you samples or a trial pound for your own experiments.

LIQUID SOAP ODOR SERIES NO. 65
Lemon • Lilac
1 lb. lots $1.05 lb. • 5 lb. lots $.95 lb.
25 lb. lots $.90 lb.

LIQUID SOAP ODOR SERIES NO. 100
Bouquet • Lavender • Lilac • Lemon • Rose
1 lb. lots $1.75 lb. • 5 lb. lots $1.65 lb.
25 lb. lots $1.60 lb.

SUPERFINE LIQUID SOAP ODORS
Bouquet • Fougere • Lavender • Lemon Verbena • Lilac • Orange Blossom • Oriental • Pine • Rose • Tar Odor
Violet • Wisteria • Jasmin
1 lb. lots $4.50 lb. • 5 lb. lots $4.35 lb. • 25 lb. lots $4.25 lb.

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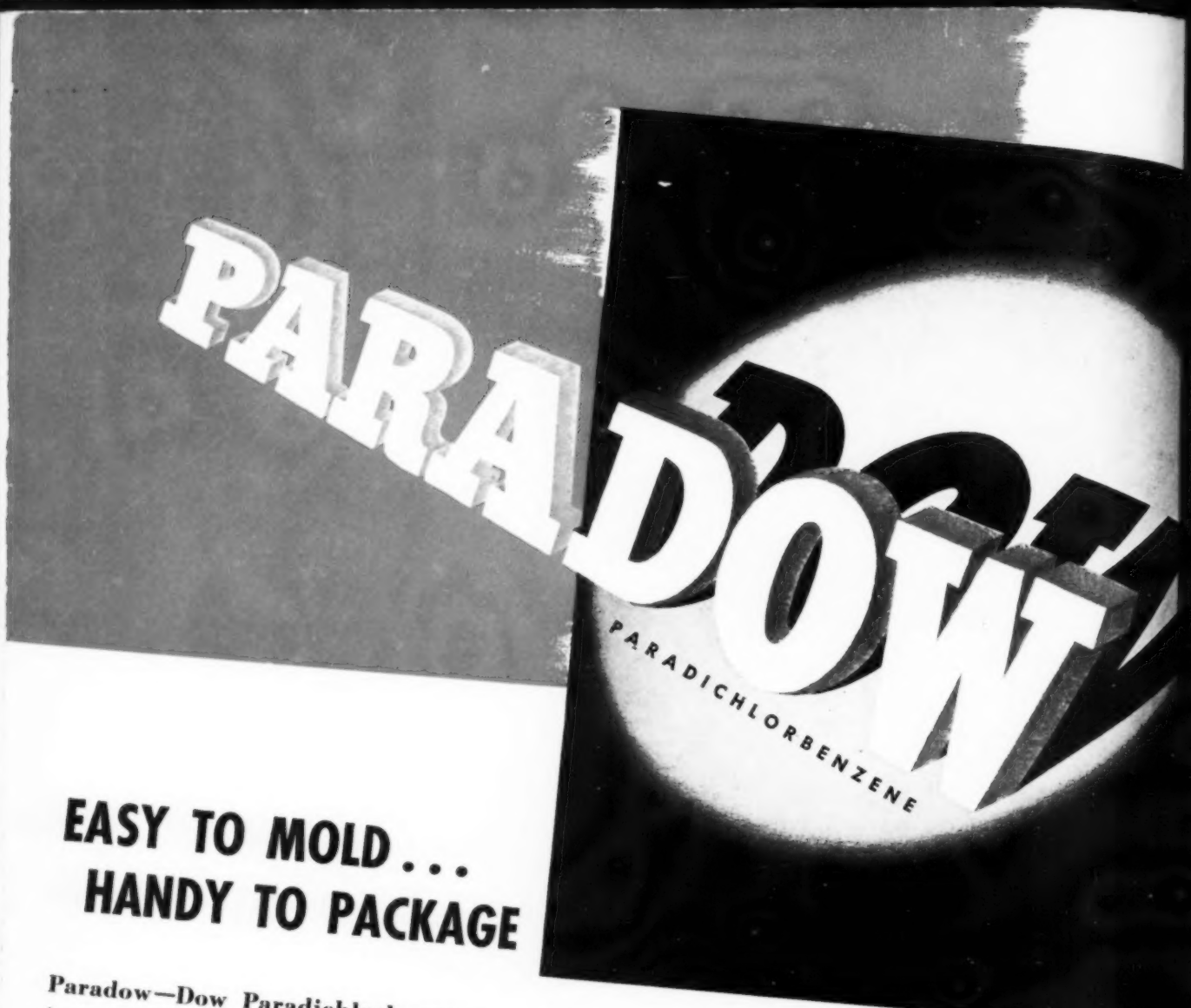

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